Hazardous Waste Generator Handbook

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I. Background

The first effort to regulate hazardous waste management on a national level occurred in 1976 with the passage by Congress of the Resource Conservation and Recovery Act (RCRA). The primary goal of the Act was to encourage the conservation of natural resources through resource recovery. RCRA also provided the statutory basis for the federal hazardous waste regulations. A key section of the Act provided for states to operate the hazardous waste management program in lieu of the Environmental Protection Agency (EPA). The regulations which have evolved into the current regulatory program were first issued in May of 1980.

The State of Kansas first passed legislation regarding hazardous waste management in 1977. The Kansas laws have been amended and added to on several occasions since then. The Kansas Department of Health and Environment (KDHE) obtained authorization to administer the hazardous waste management program from the EPA in October of 1985. Hazardous waste generators can thus deal exclusively with KDHE. With a few exceptions, KDHE has adopted the federal regulations by reference. In areas where the Kansas regulations have more stringent requirements than the federal program, the generator must comply with the state requirements.

II. Purpose

The issue of proper management of hazardous wastes is one which suffers from much misinformation and confusion. This is due in part to the constant change in the federal and state regulatory programs and the complexity of those programs. This publication was prepared to be used by industries as a guide to determine whether a facility is subject to state and federal hazardous waste management statutes and regulations. By reviewing waste generation and disposal practices, and utilizing this guide, a person should be able to do the following:

- Determine whether a facility generates hazardous wastes;
- Determine if those wastes are regulated under the Kansas hazardous waste management program;
- Learn what a facility must do to comply with the Kansas hazardous waste management statutes and regulations;
- Learn what alternative hazardous waste management options are available to a hazardous waste generator; and
- Learn what resources are available to the industry to assist in complying with the statutes and regulations.

The hazardous waste statutes place the primary responsibility for ensuring that hazardous wastes are properly managed on the person who generates those wastes. The generator must identify all hazardous wastes and be certain that they are transported and disposed in accordance with the law. While the generator can contract with hazardous waste contractors or consultants to perform these activities on his behalf, the ultimate responsibility for complying with the laws remains with the generator of the waste. For this reason, it is important for all generators of hazardous or potentially hazardous wastes to become familiar with the statutes and regulations that apply to them.

III. Who Generates Hazardous Waste?

Hazardous wastes are generated from many different chemical products and by many different types of businesses and activities. Large generators tend to be manufacturers of various products while small generators are most often in the service industries. Table I lists examples of industries and processes which typically generate hazardous wastes.

Table 1
POTENTIAL HAZARDOUS WASTE GENERATORS

Chemical Manufacturing	Sandblasting Operations
Metal Fabrication	Pesticide Applicators
Fiberglass Fabrication	Laboratories
Chemical Formulation	Vehicle Repair and Maintenance
Wood Products Manufacturing	Furniture Refinishing
Textile Manufacturing	Dry Cleaning
Metal Plating and Finishing	Printing and Related Industries

The above list is not inclusive. Each industry should evaluate all wastes generated to determine whether any of their wastes are hazardous wastes. The next section will assist in making that determination.

IV. What is a Hazardous Waste?

The first step in determining whether an industry generates hazardous wastes is to evaluate each waste generated against the list of exempted wastes in Table 2, the four lists of hazardous wastes described in the following paragraph and the four hazardous waste characteristics. Developing an inventory of all wastes generated at a facility is an important part of this process. In some cases product material safety data sheets (MSDS) can provide useful information. For some wastes, laboratory analyses must be conducted on a representative sample of the waste. These analyses must be conducted by a laboratory certified by KDHE.

It is important to remember that the exempt wastes listed in Table 2 may still pose environmental problems if they are not properly managed. Many of these wastes are therefore subject to state and federal water pollution, solid waste, or radiation control regulations.

Table 2
LIST OF EXEMPTED WASTES

- Domestic sewage, and any mixture of domestic sewage and other wastes passing through a sewer system to a publicly owned treatment works.
- Point source industrial wastewater discharges subject to KDHE permit regulations.
- Irrigation return flows.
- Source, special nuclear, or by-product material as defined by the Atomic Energy Act of 1954.
- Materials subjected to in-situ mining techniques which are not removed from the ground in the extraction process.
- Pulping liquors that are reclaimed in a recovery furnace and reused in the pulping process, unless accumulated speculatively.
- Spent sulfuric acid used to produce virgin sulfuric acid, unless it is accumulated speculatively.
- Solid wastes generated by growing and harvesting of agricultural crops or raising animals which are returned to the soil as fertilizer.
- Mining overburden returned to the mine site.
- Fly ash waste, bottom ash waste, slag waste, and flue gas emission control waste generated primarily from coal or other fossil fuel combustion.
- Drilling fluids, produced waters, and other wastes associated with the exploration, development, or production of crude oil, natural gas, or geothermal energy.
- Certain chrome-bearing wastes either containing exclusively trivalent chromium, or from the leather tanning industry.
- Solid wastes from the extraction, benefication and processing of ores and minerals.
- Cement kiln dust waste.
- Discarded wood or wood products which fail the EP-Toxicity test or the TCLP for arsenic which are not hazardous for any other reason.

Listed Hazardous Wastes 40 CFR 261, Subpart D

There are four lists of specific chemicals and industrial processes that define hazardous wastes. These are the F-list, K-list, P-list, and U-list. These wastes have been listed because they either exhibit one of the four characteristics described below or they contain any number of toxic constituents that have been shown to be harmful to human health or the environment. All four of these lists are contained in Appendix A of this document. For more information see K.A.R. 28-31-3 and 40 CFR Part 261, Subparts B and D.

F-List

The F-list contains hazardous wastes from non-specific sources, that is, the waste may have been generated by various industrial processes. The list consists of solvents commonly used in degreasing, metal treatment baths and sludges, wastewaters from metal plating operations and dioxin containing chemicals or their precursors. Examples of solvents that are F-listed hazardous wastes, along with their code numbers are: benzene (F005), carbon tetrachloride (F001), cresylic acid (F004), methyl ethyl ketone (F005), methylene chloride (F001), 1,1,1, trichloroethane (F001), toluene (F005), and trichloroethylene (F001). Solvent mixtures or blends which contain greater than ten percent of one or more of the solvents listed in F001, F002, F003, F004 and F005 are also considered F-listed wastes. The full list of F-listed wastes is contained in Appendix A.

K-List

The K-list contains hazardous wastes generated by specific industrial processes. Examples of industries which generate K-listed wastes include: wood preservation, pigment production, chemical production, petroleum refining, iron and steel production, explosives manufacturing and pesticides production. The K-list is also contained in Appendix A.

P and U Lists

The P and U lists contain discarded commercial chemical products, off-specification chemicals, container residues and residues from the spillage of materials. These two lists include commercially pure grades of the chemical, any technical grades of the chemical that are produced or marketed, and all formulations in which the chemical is the sole active ingredient. An example of a P or U listed hazardous waste would be a pesticide on one of the two lists which was not used during its shelf life and must now be disposed. At the time such a material was intended for disposal, it would be considered a hazardous waste. The primary distinction between the two lists is the quantity at which the chemical is regulated. The P-list consists of acutely hazardous wastes that are regulated when the quantity generated per month, or accumulated at any time, exceeds one kilogram (2.2 pounds). U-listed hazardous wastes are toxic wastes and are regulated when the quantity generated per month exceeds 25 kilograms (55 pounds). Both lists are contained in Appendix A. Examples of businesses that typically generate P or U listed wastes include pesticide applicators, laboratories and chemical formulators.

Characteristic Hazardous Wastes 40 CFR 261, Subpart C

If the wastes generated at a facility are not contained on the F, K, P, or U lists, the final step to determine whether a waste is hazardous is to evaluate the waste against four hazardous characteristics. These characteristics are ignitability, corrosivity, reactivity, and toxicity. They are explained below.

Ignitability (EPA Waste Identification Number D001)

A waste is an ignitable hazardous waste if it has a flash point of less than 140 degrees Fahrenheit as determined by the Pensky-Martens closed cup flash point test; readily causes fires and burns so vigorously as to create a hazard; or is an ignitable compressed gas or an oxidizer as defined by the U.S. Department of Transportation (DOT) regulations. A simple method of determining the flash point of a waste is to review the material safety data sheet, which can be obtained from the manufacturer or distributor of the material. Naphtha, lacquer thinner, epoxy resins, adhesives, and oil based paints are all examples of ignitable hazardous wastes.

Corrosivity (EPA Waste Identification Number D002)

A liquid waste which has a pH of less than or equal to 2 or greater than or equal to 12.5 is considered to be a corrosive hazardous waste. Sodium hydroxide, a caustic solution with a high pH, is often used by Kansas industries to clean or degrease metal parts. Hydrochloric acid, a solution with a low pH, is used by many industries to clean metal parts prior to painting. When these caustic or acid solutions become contaminated and must be disposed, the waste would be a corrosive hazardous waste.

Reactivity (EPA Waste Identification Number D003)

A material is considered to be a reactive hazardous waste if it is normally unstable, reacts violently with water, generates toxic gases when exposed to water or corrosive materials, or if it is capable of detonation or explosion when exposed to heat or a flame. Materials which are defined as forbidden explosives or Class A or B explosives by the U.S. Department of Transportation are also considered reactive hazardous waste. Few Kansas industries generate reactive characteristic wastes. Examples of reactive wastes would be waste gunpowder, sodium metal or wastes containing cyanides or sulfides.

Toxicity

The fourth characteristic which could make a waste a hazardous waste is toxicity. To determine if a waste is a toxic hazardous waste, a representative sample of the material must be subjected to a test conducted in a certified laboratory. The test procedure is the Toxicity Characteristic Leaching Procedure (TCLP). The complete list of TCLP compounds and their regulatory levels is contained in Table 3.

The Toxicity Characteristic rule does not apply to Underground Storage Tank (UST) wastes such as petroleum contaminated soil or debris. These materials are currently regulated under Subpart I of RCRA. EPA will conduct studies to determine the potential impact of the TCLP rule on UST wastes in order to decide whether this exemption will be continued. The rule also exempts dielectric fluid containing PCBs and electrical equipment regulated by the Toxic Substances Control Act (TSCA).

Other Wastes

Lead-Acid Batteries *(40 CFR 266)*

Used lead-acid batteries are regulated as hazardous wastes only if they are NOT recycled. Batteries that are recycled do not need to be counted in determining the quantity of hazardous waste generated per month, nor do they require a hazardous waste manifest when shipped off your premises. This exemption does not apply if you recycle batteries on your premises. A partial list of battery recyclers is contained in Appendix F.

Asbestos *(40 CFR 763)*

Asbestos is not a hazardous waste and is not subject to the hazardous waste regulations. Asbestos-containing material regulated under K.A.R. 28-50-14 may be disposed of as a special waste at a permitted municipal solid waste landfill (MSWLF) if the generator complies with the requirements of K.A.R. 28-29-109, the special waste regulation. For more information about asbestos disposal you can contact your district office or telephone (785) 296-1120.

Household Hazardous Waste

Household hazardous wastes (HHW) represent a wide variety of wastes which are produced as a result of normal household activities. Among the most common of these wastes are:

- pesticides
- paints and varnishes
- used oil
- antifreeze and other automobile fluids
- household cleaners, polishes, and waxes
- wood preservatives
- photo and hobby chemicals
- swimming pool chemicals
- batteries

Although HHW is exempt from regulation as hazardous waste, many environmentally conscious citizens want a safe and convenient alternative to disposal with ordinary trash. To learn whether or not there is an HHW collection program in your area you can contact your KDHE district office or telephone (785) 291-3132.

Used Oil *(40 CFR 279)*

Used oil that is recycled for energy or material recovery is not subject to the hazardous waste regulations. Used oil that is recycled by burning in a space heater or by a used oil collector does not need to be counted in determining the quantity of waste generated per month, nor does it require a hazardous waste manifest when shipped off your premises. A partial list of used oil collectors is contained in Appendix E. Used oil can be burned in oil fired space heaters provided that:

- The heater burns only used oil that the owner or operator generates or used oil received from do-it-yourself oil changers who generate used oil as household waste;

- The heater is designed to have a maximum capacity of not more than 0.5 million BTU per hour; and

- The combustion gases from the heater are vented to the outside air.

If you burn used oil in an industrial boiler or furnace or sell your oil to someone who is burning it you are required to notify KDHE on the notification form contained in Appendix B. You do not need to notify KDHE if you burn used oil in a space heater. Used oil generators do not need to notify.

Used oil that is mixed with hazardous waste must be managed as hazardous waste unless it is from a small quantity generator (K.A.R. 28-31-4(p)(4)). Used oil cannot be discharged onto the ground, waterways or used as a sealant, coating or a dust control agent for roads or parking lots.

Polychlorinated Biphenyls (PCBs) *(40 CFR 761)*

Polychlorinated Biphenyls (PCBs) are not a hazardous waste and are not subject to hazardous waste regulations. The use, storage and disposal of PCBs is regulated under the federal Toxic Substances Control Act (TSCA). Additional information on the storage, transportation, and disposal of PCBs may be obtained by contacting the Topeka office of KDHE.

Mixed Waste

Mixed waste is waste which contains a radioactive component subject to the Atomic Energy Act (AEA), and a hazardous component which is either a listed hazardous waste or is a characteristic hazardous waste. The hazardous waste component is regulated by KDHE. Any waste which contains a radioactive component subject to the Atomic Energy Act, and a hazardous component subject to regulation is considered a mixed waste, regardless of the classification of its radioactive component as high-level, low-level, transuranic, or other.

Medical Facility Waste

Medical facilities may generate three types of special wastes: infectious, radiological, and chemical. Infectious wastes are not regulated as hazardous wastes, but are regulated as a solid waste in Kansas. Guidelines for managing such wastes can be obtained from the Solid Waste Management section of the Bureau of Waste Management (K.A.R. 28-29-27). Radiological wastes which are not mixed wastes are regulated by the Bureau of Air and Radiation. Medical facilities which generate listed or characteristic chemical wastes must comply with the same requirements as other generators of hazardous wastes.

Empty Containers *(40 CFR 261.7)*

Containers or container liners which have held hazardous materials are not regulated as hazardous wastes if all removable wastes have been emptied. A container is considered empty according to the requirements of 40 CFR 261.7 if:

- All wastes have been removed that can be removed by pouring, pumping, and aspirating, and

- No more than one inch of residue remains on the bottom, or

- No more than 3.0 percent by weight of the contents remain inside the container (110 gallon container or less), or

- No more than 0.3 percent by weight of the contents remain inside the container (containers larger than 110 gallons).

Empty containers which contain P-listed wastes must be triple-rinsed using an appropriate solvent before they are considered empty.

Universal Waste (40 CFR 273)

Certain widely handled wastes (batteries, pesticides, mercury-containing thermostats, and hazardous waste lamps) may be managed as universal wastes. Under the provisions of 40 CFR 273, the environmentally sound collection, recycling, or treatment of hazardous waste nickel-cadmium and other batteries, certain hazardous waste pesticides, and mercury-containing thermostats is greatly facilitated. A facility that accumulates 5,000 kg or more total universal waste at any time and has not previously notified KDHE as a generator of hazardous waste needs to contact KDHE to obtain specific notification requirements.

TABLE 3

Toxicity Characteristic Constituents – REGULATORY LEVELS AND WASTE CODES

Volatile Compounds		
Benzene	.5 mg/l	D018
Carbon tetrachloride	.5 mg/l	D019
Chlorobenzene	100.0 mg/l	D021
Chloroform	6.0 mg/l	D022
1,2-dichloroethane	.5 mg/l	D028
1,1-dichloroethylene	.7 mg/l	D029
2,4-dinitrotoluene	.13 mg/l	D030
Methyl Ethyl Ketone	200.0 mg/l	D035
Tetrachloroethylene	.7 mg/l	D039
Trichloroethylene	.5 mg/l	D040
Vinyl Chloride	.2 mg/l	D043

Base Neutral Acids		
o-cresol	200.0 mg/l	D023
m-cresol	200.0 mg/l	D024
p-cresol	200.0 mg/l	D025
Cresol	200.0 mg/l	D026
1,4-dichlorobenzene	7.5 mg/l	D027
Hexachlorobenzene	.13 mg/l	D032
Hexachlorobutadiene	.5 mg/l	D033
Hexachloroethane	3.0 mg/l	D034
Nitrobenzene	2.0 mg/l	D036
Pentachlorophenol	100 mg/l	D037
Pyridine	5.0 mg/l	D038
2,4,5-trichlorophenol	400.0 mg/l	D041
2,4,6,-trichlorophenol	2.0 mg/l	D042

Pesticides		
Chlordane	.03 mg/l	D020
Endrin	.02 mg/l	D012*
Heptachlor	.008 mg/l	D031
Lindane	.4 mg/l	D013*
Methoxychlor	10.0 mg/l	D014*
Toxaphene	.5 mg/l	D015*

Herbicides		
2,4,-D	10.0 mg/l	D016*
2,4,5-TP (Silvex)	1.0 mg/l	D017*

Metals		
Arsenic	5.0 mg/l	D004*
Barium	100.0 mg/l	D005*
Cadmium	1.0 mg/l	D006*
Chromium	5.0 mg/l	D007*
Lead	5.0 mg/l	D008*
Mercury	.2 mg/l	D009*
Selenium	1.0 mg/l	D010*
Silver	5.0 mg/l	D011*

The constituents noted (*) are the original EP Toxicity constituents.

V. What Quantities of Hazardous Waste Are Regulated?

After a generator determines which wastes are hazardous waste the next step is to determine the generation rate and maximum quantities which are accumulated. The generation rate is determined by adding together the total quantity of hazardous waste from all sources each calendar month. In determining the generation rate the actual amount of waste generated each calendar month is used, not an average over a number of months.

In determining the quantity of hazardous waste generated each calendar month, a generator need not include the following:

- Hazardous waste when it is removed from on-site storage; or
- Hazardous waste produced by on-site treatment including reclamation of hazardous waste, so long as the hazardous waste that is treated or reclaimed is counted each time prior to treatment or reclamation. An example is the on-site distillation of solvents. The generator must count the amount of contaminated solvent put into the distillation unit, not the still bottom sludge that is produced.

Kansas regulations define three categories of hazardous waste generators which are described in detail below. A generator must determine which category his facility is classified as in order to determine which regulations must be followed. It should be noted that a facility may change status from one category to another depending upon generation rates and accumulated quantities.

Small Quantity Generator

A small quantity generator is a person who meets all of the following conditions:

- Generates in any single calendar month less than 25 kilograms (55 pounds) of hazardous waste;
- Accumulates at any time less than 1,000 kilograms (2,200 pounds) of hazardous waste;
- Generates in any single calendar month less than 1 kilogram (2.2 pounds) of acutely hazardous waste;
- Accumulates at any time less than 1 kilogram (2.2 pounds) of acutely hazardous waste;
- Generates in any single calendar month less than 25 kilograms (55 pounds) of any residue or contaminated soil, waste, or other debris resulting from the cleanup of a spill of acutely hazardous waste; and
- Accumulates at any time less than 25 kilograms (55 pounds) of any residue or contaminated soil, waste, or other debris resulting from the cleanup of a spill of acutely hazardous waste.

Kansas Generator

A Kansas generator is any person who meets all of the following conditions:

- Generates in any single calendar month 25 kilograms (55 pounds) or more and less than 1,000 kilograms (2,200 pounds) of hazardous waste;
- Accumulates at any time less than 1,000 kilograms (2,200 pounds) of hazardous waste;
- Generates in any single calendar month less than 1 kilogram (2.2 pounds) of acutely hazardous waste;
- Accumulates at any time less than 1 kilogram (2.2 pounds) of acutely hazardous waste;
- Generates in any single calendar month less than 25 kilograms (55 pounds) of any residue or contaminated soil, waste, or other debris resulting from the cleanup of a spill of acutely hazardous waste; and
- Accumulates at any time less than 25 kilograms (55 pounds) of any residue or contaminated soil, waste, or other debris resulting from the cleanup of a spill of acutely hazardous waste.

EPA Generator

An EPA generator is a person who meets any of the following conditions:

- Generates in any single calendar month 1,000 kilograms (2,200 pounds) or more of hazardous waste;
- Accumulates at any time 1,000 kilograms (2,200 pounds) or more of hazardous waste;
- Generates in any single calendar month 1 kilogram (2.2 pounds) or more of acutely hazardous waste;
- Accumulates at any time 1 kilogram (2.2 pounds) or more of acutely hazardous waste;
- Generates in any single calendar month 25 kilograms (55 pounds) or more of any residue or contaminated soil, waste, or other debris resulting from the cleanup of a spill of any acutely hazardous waste; or
- Accumulates at any time 25 kilograms (55 pounds) or more of any residue or contaminated soil, waste, or other debris resulting from the cleanup of a spill of acutely hazardous waste.

VI. What Regulations Must Hazardous Waste Generators Meet?

Small Quantity Generator

Small quantity generators are required to manage hazardous wastes in an environmentally sound fashion. They are not subject to any notification or reporting requirements. Small quantity generators may use any of the following alternatives to handle hazardous wastes when disposed in quantities less than 25 kg: recycling, reuse, reclamation, disposal at a permitted sanitary landfill, neutralization and discharge to the sanitary sewer only with permission of the city, and disposal at a permitted hazardous waste disposal facility. Hazardous wastes such as solvents, sludges and pesticides are not suitable for discharge to the sanitary sewer. Small quantities of hazardous waste may NOT be disposed of by dumping on the surface of the ground or into surface waters, burying in the ground at an unpermitted site, or by using wastes such as solvents for killing weeds. The small quantity generator regulations are located at K.A.R. 28-31-4(m).

Small quantity generators who accumulate 25 kg or more of hazardous waste must recycle, treat or dispose of the waste either on site or at a hazardous waste management facility. In addition they are subject to the following requirements:

A. Package, label, mark and placard all shipments of hazardous waste in accordance with the pre-transportation requirements contained in K.A.R. 28-31-4(e). All containers of hazardous waste must be marked with the words "Hazardous Waste". Appendix G provides a list of labels and suppliers.

B. Follow the dating and marking requirements for containers and tanks (K.A.R. 28-31-4(h)(1), sections (B), (C), and (D)).

C. Document weekly inspection of hazardous waste storage areas (K.A.R. 28-31-4(k)).

Kansas Generator

Kansas generators must comply with the following regulatory requirements:

A. Determine which wastes generated by the facility are hazardous by reviewing the four hazardous characteristics, the four lists of hazardous wastes or by knowledge of the process which generates the waste (K.A.R. 28-31-4(b)). All hazardous wastes must be managed by treatment on site; or by transportation to a commercial treatment, storage, or disposal (TSD) facility; or by transportation to a facility designated for recycling.

B. Obtain an EPA identification number by submitting a hazardous waste notification form to the Kansas Department of Health and Environment (K.A.R. 28-31-4(c)). Appendix B of this brochure contains a hazardous waste notification form along with instructions for completing the form. The notification must be updated when the information on the original form changes. * Please telephone (785) 296-1600 for the most recent edition of the notification form.

C. Prepare a manifest for all shipments of hazardous waste in accordance with K.A.R. 28-31-4(d). Appendix C of this brochure provides a sample copy of the uniform hazardous waste manifest.

D. Package, label, mark and placard all shipments of hazardous waste in accordance with the pre-transportation requirements contained in K.A.R. 28-31-4(e). All containers of hazardous waste

must be marked with the words "Hazardous Waste". Appendix G provides a list of labels and suppliers.

E. Prepare and maintain the following records for three years (K.A.R. 28-31-4(f)).

1) A signed copy of all manifests initiated.

2) Manifest exception reports.

3) Hazardous waste analyses.

4) Weekly inspection reports.

F. Meet the following storage requirements for containers and/or tanks (K.A.R. 28-31-4(h)):

For containers:

1) Mark each container with the words "Hazardous Waste" and the accumulation start date.

2) Maintain the containers in good condition.

3) Use a container compatible with the hazardous waste to be stored.

4) Keep containers closed except when adding or removing waste.

5) Inspect storage areas weekly and maintain a log of inspections.

6) Satellite accumulation:

a) A generator may accumulate one container of up to 55 gallons of each hazardous waste or one container of up to one quart of each acutely hazardous waste at the point of waste generation, provided the containers: are compatible with the waste; are in good condition; are closed except to add or remove wastes; and are marked with the words "Hazardous Waste".

b) When the generator accumulates more than the amounts listed above, the accumulation start date shall be placed on the full container. The generator shall move the full container to the hazardous waste storage area within three days.

For tanks:

1) Maintain 2 feet of freeboard in uncovered tanks without containment.

2) Conduct a waste analysis and trial tests when necessary.

3) Inspect discharge control equipment, monitoring equipment, the level of waste in the tank, and construction materials of the tank and dikes daily. Maintain a log of inspections.

4) Do not place ignitable, reactive or incompatible wastes in tanks unless appropriate precautions are taken.

5) Provide secondary containment unless the tank is exempt as described in 40 CFR 265.193

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G. Meet the following emergency preparedness requirements contained in K.A.R. 28-31-4(h):

1) Designate an emergency coordinator who is on the premises or on call at all times to coordinate emergency response measures.

2) Post the name and phone number of the emergency coordinator, the phone number of the fire department, and the location of fire extinguishers, spill control equipment and fire alarms next to one telephone which is accessible during an emergency.

3) Ensure that all employees are thoroughly familiar with proper waste handling and emergency procedures.

4) Carry out the appropriate response to any emergency that arises as described in K.A.R. 28-31-4(h).

H. Report all international shipments of hazardous waste to the Kansas Department of Health and Environment and the Environmental Protection Agency (40 CFR, Part 262, Subpart E).

EPA Generator

EPA generators are subject to all regulations for Kansas Generators, except for the emergency preparedness requirements, as well as the following additional requirements.

A. EPA generators must prepare and submit a biennial report to KDHE by March 1 of each even-numbered year. The biennial report must contain all of the information required by K.A.R. 28-31-4(f)(2).

B. An EPA generator may accumulate hazardous waste on-site for 90 days or less without a permit or without obtaining interim status if the generator complies with K.A.R. 28-31-4(g).

C. Provide a personnel training program to ensure that facility personnel are able to respond effectively to a hazardous waste emergency (K.A.R. 28-31-4 (g)). The program must include:

1) A director trained in hazardous waste procedures.

2) Instruction which teaches facility personnel about the location of emergency response and monitoring equipment, maintenance and operation of such equipment, communications procedures and response procedures for fires, explosions and contamination incidents. Training must be completed within six months after the date an employee enters a position.

3) An annual review of the initial training.

4) Development of job titles, job descriptions, a description of training to be given each job title, and a record of all training which occurs.

D. Adequately provide for preparedness and prevention (K.A.R. 28-31-4 (g)) with the following precautions:

1) Proper maintenance of facilities to minimize releases of hazardous waste.

2) Where appropriate for the type of waste generated, provide an internal communications or alarm system, a telephone or two-way radio, and fire extinguishing and control equipment. All required equipment must be tested and maintained to ensure proper operation.

3) Provide personnel working directly with hazardous waste with immediate access to communications and alarm equipment.

4) Maintain aisle space sufficient to allow passage of personnel and fire, spill control and decontamination equipment.

5) Make arrangements with the local hospital, police department, fire department and emergency response team to familiarize them with the plant layout and the hazards involved with the wastes generated. Such arrangements should be documented.

E. Prepare a contingency plan and implement emergency procedures to ensure that releases of hazardous waste are properly handled (K.A.R. 28-31-4 (g)). The contingency plan must provide for:

1) A description of the actions facility personnel must take to respond to a release.

2) A description of the arrangements made with local authorities for emergency services.

3) Designation of primary and secondary emergency coordinators and listing of their addresses and phone numbers. Assure that an emergency coordinator is on site or on call at all times.

4) A list of all emergency equipment on site, its capabilities and its location.

5) An evacuation plan where the potential need for evacuation exists.

6) Copies of the contingency plan to be maintained at the facility and submitted to the local police department, fire department, hospital and emergency response team.

7) The contingency plan to be periodically reviewed and maintained current.

Land Disposal Restrictions (40 CFR 268 and BWM Policy 98-04)

Background

The 1984 Hazardous and Solid Waste Amendments (HSWA) required EPA to evaluate all characteristic and listed hazardous wastes to determine which wastes should be restricted from land disposal. For wastes that are restricted, EPA has set treatment standards to ensure that hazardous constituents will not migrate from the disposal site. K.A.R. 28-31-14 adopts the federal land disposal restrictions contained in 40 CFR Part 268 by reference.

Beyond target dates established in a schedule contained in the law, restricted wastes that do not meet the treatment standards are prohibited from land disposal. Wastes that are not appropriate for land disposal under any circumstances are banned from land disposal completely. The first rule, issued in November of 1986, prohibited land disposal of F-listed solvents and dioxin-containing wastes. The second rule included the "California List" of wastes. It prohibits the land disposal of strong acids, liquids with PCBs greater than or equal to 50 ppm, liquids containing halogenated organic compounds (HOC) or free cyanides at greater than or equal to 1,000 ppm, and liquids containing heavy metals at greater than specified concentrations. Three subsequent rules established treatment standards or prohibitions for all remaining wastes. The last of these occurred on May 8, 1990.

HSWA also provided limited opportunities for delaying the effective date of prohibitions or gaining an exemption from the prohibitions. These include national capacity extensions, treatability variances, case by case extensions and no migration petitions. For the most part, these extensions have either expired or are not practical for a generator who does not have extremely large quantities of waste requiring disposal.

For purposes of implementing the land disposal restrictions, land disposal is defined to include: landfills, surface impoundments, waste piles, injection wells, land treatment facilities, salt domes or caves, underground mines or caves and concrete vaults or bunkers. An important provision of the land disposal restrictions is that dilution cannot be used to circumvent a treatment standard for a restricted waste. Dilution as a necessary part of a waste treatment process is allowed. EPA has established regulatory requirements for generators, treatment facilities and disposal facilities. This handbook will address only the generator requirements.

Generator Requirements

The generator requirements under the land disposal restrictions can be divided into two general areas. The first is the determination of the applicability of the requirements to a given waste. The second is the provision of notice and certification to storage, treatment, or disposal facilities.

Determination

A generator must determine whether a waste is subject to the land disposal restriction rules and whether the waste meets or exceeds the applicable treatment standard. For the majority of characteristic hazardous wastes, the waste must be treated to the point that it no longer exhibits the characteristic.

Appendix A contains a list of commonly generated F-listed wastes. The treatment standards for these wastes are listed in 40 CFR 268, subpart D. For other wastes, your hazardous waste disposal firm should be able to provide the treatment standard. You may also contact the Department for assistance.

The second step is to determine whether the waste meets or exceeds the treatment standard. This can be done by knowledge of the waste, conducting a total waste analysis, or conducting a Toxicity Characteristic Leaching Procedure (TCLP) test. In many cases, knowledge of the process can be used to determine whether a waste exceeds the treatment standard. Knowledge of the waste or a total waste analysis cannot be used to prove that a waste does not exceed the treatment standard.

If the waste meets the treatment standard, the generator may send the waste directly to a disposal facility. If the waste does not meet the treatment standard, it must be treated to meet the standard before a land disposal facility can be used.

EPA has established three types of treatment standards. These include concentrations of contaminants in an extract of the waste, concentrations of contaminants in the waste itself and specific treatment technologies that must be used. For certain wastes, EPA has not yet established treatment standards.

Notification

If a waste meets the treatment standard, the generator may send the waste directly to a land disposal facility. The generator must provide a one-time notification with the first waste shipment and keep a copy of the bill of lading with the following information for each subsequent shipment:

- The EPA hazardous waste number(s) for the waste;
- The applicable treatment standard;
- The waste analysis data (if available).

The generator must also provide a signed certification stating that the waste delivered to the disposal facility meets the treatment standard, and that the information included in the notice is true, accurate and complete. If the treatment standard is not currently applicable because EPA has granted an extension to the effective date for a particular waste, the generator is responsible for notifying the land disposal facility. Land ban notices and certifications must be maintained for three years.

If a waste does not meet the treatment standard, it must be treated prior to disposal. The generator must include a notice containing the four items noted above, with shipment to a storage or treatment facility. This includes recyclers, reclaimers and incinerators since residues from these facilities may ultimately require land disposal.

VII. What Hazardous Waste Management Options Are Available to a Generator?

Many alternatives exist for properly managing hazardous wastes. These alternatives are listed below in their order of desirability. With proper use of these techniques, the economic burden and liability of handling wastes can be significantly reduced.

Waste Minimization

Waste minimization is any change in a process that reduces or eliminates the amount of waste generated or reduces the toxicity of the waste that is generated. A waste minimization plan is an important component of any comprehensive waste management program. The Hazardous and Solid Waste Amendments to RCRA of 1984 recognized the importance of this approach when declaring it to be "the national policy of the United States that, whenever feasible, the generation of hazardous waste is to be reduced or eliminated as expeditiously as possible." Taking waste minimization from a goal to a reality has not been easy even though it offers a business many advantages. These advantages include economic incentives, regulatory compliance, worker safety and protection of the environment.

Waste minimization changes that reduce the volume or toxicity of a hazardous waste can result in lower treatment and disposal costs a decrease in the long-term liability associated with disposing of hazardous waste at off-site disposal facilities, and provide a safer work place by reducing the exposure of workers to hazardous materials. They can also change the generator status of a facility resulting in a lesser regulatory burden and lower the generator monitoring fees for a facility.

Any type of waste minimization activity also benefits the environment through preservation of natural resources that go into manufacture of raw materials and reducing the need for hazardous waste management facilities.

Waste reduction can only be accomplished if there is a commitment to the goal throughout the organization. The first step in minimizing wastes is to identify all waste streams and the processes that generate them. The following changes represent a few of the actions that can then be taken to reduce or eliminate excess waste generation.

- Managing the hazardous materials inventory to ensure that hazardous materials do not become hazardous wastes when processes or product specifications change.
- Use only the amount of raw material needed to perform the task. Many facilities have substantially reduced the amount of paints and solvents needed by training workers in improved painting and cleaning methods.
- Ensure that all products and wastes are clearly labeled and properly stored. Improper storage can result in accidental contamination of a product or require expensive testing to identify a product.
- Substitute a non-hazardous product for a hazardous one. Changing primers or paints to products that do not contain heavy metals is one of the most common waste minimization changes.
- Use sludge dryers, filter presses or similar equipment to reduce the volume of liquid wastes generated in large quantities.
- Replace existing equipment with more efficient equipment to perform the same operation. In the coating industry, for example, replacement of conventional air-atomized spray equipment with electrostatic or powder coating equipment can result in a substantial waste reduction.
- Minimize losses due to evaporation by installation of vapor recovery systems, placing covers on tanks, and ensuring that lids are kept on containers of volatile hazardous materials.

Material or Energy Recovery

Material recovery occurs when a waste is treated to allow continued use as a raw material. An example is the distillation of contaminated solvents. This may be done with a small still at the generator's facility or by a commercial recycling firm. The method results in savings on the purchase of raw materials and reduces the volume of waste requiring disposal.

Energy recovery occurs when a waste with fuel value is burned as a fuel in an industrial boiler or furnace. This method is appropriate for solvents that have been contaminated to the point where they are no longer suitable for distillation. This alternative is not suitable for chlorinated solvents or other hazardous wastes with fuel values below 5,000 BTU per pound. The most common form of energy recovery in Kansas is the use of spent solvents as supplemental fuels in cement kilns.

Waste Treatment

Many hazardous wastes can be treated to render them non-hazardous. This can be done at a commercial treatment facility or at the generator's site. An example of a form of treatment performed by many generators is neutralization of an acid or caustic waste to allow discharge of the treated waste to a wastewater treatment plant. Other forms of treatment include fixation, stabilization, solidification, chemical reduction and incineration.

Some form of treatment, such as neutralization, can be performed by a generator without requiring a treatment permit. In general, treatment can only be performed by a permitted treatment facility. Contact KDHE before treating any hazardous waste to determine whether a permit is needed for your particular case.

Ultimate Disposal

Hazardous wastes which are not suitable for any of the above recycling or treatment techniques must be ultimately disposed of by chemical destruction, deep well injection, or land burial. Many of the treatment techniques discussed above also result in residues which must be disposed. Disposal via deep well injection and land burial is restricted to certain types of hazardous wastes and should be reserved for situations where alternative management methods are not possible.

VIII. Choosing a Hazardous Waste Management Facility

If your firm generates hazardous waste which must be shipped off-site for treatment or disposal, you must be careful to ensure that your waste will be managed according to state and federal regulations. This is to protect your company from the liability risks which you face as a generator.

If possible, have a representative of your firm visit the treatment or disposal facility prior to shipping wastes there. You can then assess for yourself how your wastes will be managed. If a visit to the facility is not possible, contact the regulatory agency in the state the facility is located. Speak with the inspector of the facility concerning the firm's operating record and current regulatory status.

The following section provides suggested questions to ask of the facility's sales representatives, state regulatory staff and, if visited, facility staff.

Selecting a Facility

Questions should be asked of a facility's representative and environmental officials in the state where the facility is located. The following questions should be addressed to the facility representative.

- Are they acting as the final treatment/disposal facility or are they a broker? If they are a broker, how is the actual facility going to treat or dispose of the waste?
- Who are some of their other customers in your area with similar wastes? Check the company's reputation with their other customers.
- How will the waste be transported to the facility? Does the company use their own vehicles or a contract carrier?
- Obtain a copy of the company's EPA Notification of Hazardous Waste Activity (Form 8700-12), and copies of portions of permits which cover the kinds of wastes handled at the facility.
- Does the facility have a minimum charge for their services for each shipment?
- Is a waste sample required? If so, what fee is assessed for analysis? If you have already had the waste analyzed by an outside laboratory, is that analysis acceptable?
- How long will it take to complete arrangements for shipment?

Contact the regulatory agency which monitors the facility. Ask to speak with the person most familiar with the site. Table 4 lists the name and telephone number for environmental agencies in states that have treatment or disposal facilities which often receive waste from Kansas generators. Some suggested questions to ask are:

- Is the facility currently in compliance with all regulations? If not, what are their deficiencies?
- Is the facility currently under any consent orders for past deficiencies?
- Has the facility received any fines in the past?
- How often is the facility inspected?
- Is the facility listed on the NPL (Superfund cleanup) list?

Before Arranging Waste Shipment

- Obtain a copy of the facility's certificate of insurance.
- Obtain a contract with the facility for their services. Know where your waste is going, how it is being managed, and the disposition of any residues, ash, and empty drums.

Table 4
State Environmental Agencies

Alabama Department of Environmental Management	(334) 271-7737
Arkansas Department of Pollution Control & Ecology	(501)-682-0833
Colorado Department of Health	(303) 692-3342
Illinois Environmental Protection Agency	(217) 782-3397
Indiana Department of Environmental Management	(317) 232-8857
Louisiana Department of Environmental Quality	(225) 765-0246
Missouri Department of Natural Resources	(573) 751-3176
Nebraska Department of Environmental Quality	(402) 471-2186
Oklahoma State Department of Health	(405) 271-5600
Texas Water Commission	(912) 912-6060
Utah Department of Environmental Quality	(801) 538-6170
Wisconsin Department of Natural Resources	(608) 266-7017

IX. How to Avoid Compliance Problems And Minimize Liability

The following recommendations are intended to help ensure compliance with the hazardous waste regulations and to minimize the liability associated with generating hazardous wastes.

- Locate and deal with reputable transportation, treatment and disposal firms (See Section VIII). If the price quote is substantially less than the competition, there is probably a reason why.
- Have backup transporters and disposal sites selected in case your primary provider has problems.
- Recognize when you lack the expertise to handle a particular problem and seek out help from a person with experience in hazardous waste management. (See Section X for assistance.)
- Follow up on all hazardous waste shipments to ensure they reach their intended destination and are treated or disposed.
- Do not mix hazardous wastes with non-hazardous wastes. The resultant mixture will be a hazardous waste and may be more difficult or costly to dispose than the original waste.

- Maintain all records regarding the hazardous waste program (test results, contingency plan, manifests, exception reports, annual reports, training documents) in one location.
- Designate one employee with an appropriate background to be responsible for hazardous waste management. Give that employee the authority and resources to do the job, then hold him or her accountable.
- Conduct inspections of your facility and its operations. Do so with an open mind and no preconceived notions of the way things ought to be.

X. Resources Available to Assist In Properly Managing Hazardous Waste

Kansas Department of Health and Environment (KDHE)

KDHE has six district offices in Kansas. Staff members with hazardous waste program expertise are in each of these district offices. The address and telephone number for each KDHE district office is listed in Table 5.

KDHE periodically offers training opportunities throughout the state. For information concerning training or other questions pertaining to hazardous waste regulation, you may contact KDHE's Bureau of Waste Management (BWM) Topeka Office. Contacts and phone numbers within BWM are listed below:

Waste Policy, Planning and Outreach Section
Telephone Number (785) 296-1617

Waste Programs Compliance & Enforcement Unit
Telephone Number (785) 296-1604

BWM also has Technical Guidance Documents (TGDs) available for distribution covering a range of topics that augment the hazardous waste statutes and regulations. The TGDs and other information are available on the internet at:

www.kdhe.state.ks.us/waste

US Environmental Protection Agency (EPA)

EPA operates a hazardous waste hotline to provide information on the federal hazardous waste regulations to interested parties. The toll-free telephone number is (800) 424-9346. EPA also staffs a regional office in Kansas City, Kansas (EPA Region VII). The Region VII office maintains a library of current regulations, guidance documents, and training manuals. Many of these materials are available to the public at no cost. The telephone number for the Region VII information resources center is (913) 551-7241.

It should be noted that while Kansas Statutes and Regulations generally mirror Federal laws and regulations, differences do exist between the State and Federal programs. Therefore, KDHE staff should be consulted prior to acting on any information which requires a regulatory interpretation.

Table 5
KDHE District Offices

Northwest District Office 2301 East 13th Street Hays, Kansas 67601 (785) 625-5663	North Central District Office 2501 Market Place, Suite D Salina, Kansas 67401 (785) 827-9639	Northeast District Office 800 West 24th Street Lawrence, Kansas 66046 (785) 842-4600
Southwest District Office 302 West McArtor Road Dodge City, Kansas 67801 (620) 225-0596	South Central District Office 130 S. Market, 6th Floor Wichita, Kansas 67202 (316) 337-6020	Southeast District Office 1500 West 7th Street Chanute, Kansas 66720 (620) 431-2390

Other Sources of Training/Information

- **Kansas State University**

  The Kansas State University (KSU), Engineering Extension Program can provide technical assistance in hazardous waste management. KSU specializes in providing information on waste minimization. They may be reached at (785) 532-6026.

- **University of Kansas**

  The University of Kansas (KU) offers a number of training opportunities through its Division of Continuing Education. For specific information, they may be reached at (785) 491-0221.

- **Other Institutions**

  Other Kansas colleges, universities, and community colleges offer environmental training. For information on any available training, contact the continuing education director at the institution.

- **Trade Associations**

  Numerous trade associations exist on local, state, and national levels which represent the interests of individuals or companies who perform a common industrial activity. These associations are generally familiar with the regulations affecting the industry they represent and are able to offer advice and assistance in interpreting the regulations. Some associations also offer training courses, seminars, or conferences focusing on the interpretation and application of regulations.

- **Technical Journals/Publications**

  There are various technical journals and publications available which address specific areas of the hazardous waste handling. You may find some of these publications at local libraries. It is most probable, however, that you will find the greatest numbers of these publications at major university libraries.

Commercial Services/Supplies

- **Labeling Supplies**

  Appendix G contains a list of firms that sell signs, labels, placards and related materials necessary to comply with the hazardous waste regulations.

- **Container Suppliers**

  Appendix H contains a list of firms that sell drums acceptable for storing and transporting hazardous wastes.

Professional Services

- **Laboratories**

  In order for an industry to evaluate wastes generated for the characteristics of ignitability, corrosivity and toxicity, it will be necessary to conduct laboratory analyses. For information on laboratories in or near Kansas which are certified by the Department of Health and Environment see Appendix K.

- **Hazardous Waste Facilities**

  Appendices E, F, and G consist of lists of commercial hazardous waste disposal sites, waste oil collectors and battery recyclers. Before dealing with any firm, a generator should ensure that the facility has current permits for the type of activities conducted by the firm and may wish to check the environmental regulatory agency for the state where the facility is located to determine if the facility is in compliance with the hazardous waste regulations.

- **Consultants**

  There are numerous local, regional, and national consulting firms which offer professional services on a fee basis. These consultants can assist in regulatory interpretation, facility design, construction oversight, process design, etc. If you choose to utilize a consultant, KDHE recommends you and your consultant meet with KDHE to discuss any proposed projects prior to initiating the project. This should ensure both you and your consultant are aware of regulatory requirements specific to Kansas.

  When selecting a consultant, you should:

  - Consider the qualifications of the consultants. Be sure the consultant has experience in the hazardous waste field and is capable of performing the task at hand.
  - Request proposals from the top three candidate consultants. If desired, personally interview each of the three.
  - Check with recent clients of the consultants to ascertain the quality of the work performed.
  - Rank the three consultants, and select the most qualified.

Appendix A

Hazardous Wastes from Non-Specific Sources (F-List)

Industry and EPA Hazardous Waste Number	Hazardous Waste (Hazard Code)
F001	The following spent halogenated solvents used in degreasing: Tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride, and chlorinated fluorocarbons; all spent solvent mixtures/blends used in degreasing containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those solvents listed in F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures (T)
F002	The following spent halogenated solvents: Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane, and 1,1,2-trichloroethane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those listed in F001, F004, or F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures (T)
F003	The following spent non-halogenated solvents: Xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; all spent solvent mixtures/blends containing, before use, only the above spent non-halogenated solvents; and all spent solvent mixtures/blends containing, before use, one or more of the above non-halogenated solvents, and, a total of ten percent or more (by volume) of one or more of those solvents listed in F001, F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures (I)
F004	The following spent non-halogenated solvents: Cresols and cresylic acid, and nitrobenzene; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above non-halogenated solvents or those solvents listed in F001, F002, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures (T)
F005	The following spent non-halogenated solvents: Toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, benzene, 2-ethoxyethanol, and 2-nitropropane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above non-halogenated solvents or those solvents listed in F001, F002, or F004; and still bottoms from the recovery of these spent solvents and spent solvent mixtures (I, T)
F006	Wastewater treatment sludges from electroplating operations except from the following processes: (1) Sulfuric acid anodizing of aluminum; (2) tin plating on carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-aluminum plating on carbon steel; (5) cleaning/stripping associated with tin, zinc and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum (T)
F019	Wastewater treatment sludges from the chemical conversion coating of aluminum (T)
F007	Spent cyanide plating bath solutions from electroplating operations (R, T)
F008	Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process (R, T)
F009	Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process (R, T)
F010	Quenching bath residues from oil baths from metal heat treating operations where cyanides are used in the process (R, T)
F011	Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations (R, T)

Industry and EPA Hazardous Waste Number	Hazardous Waste (Hazard Code)
F012	Quenching waste water treatment sludges from metal heat treating operations where cyanides are used in the process (T)
F024	Wastes, including but not limited to, distillation residues, heavy ends, tars, and reactor clean-out wastes from the production of chlorinated aliphatic hydrocarbons, having carbon content from one to five, utilizing free radical catalyzed processes. [This listing does not include light ends, spent filters and filter aids, spent dessicants, wastewater, wastewater treatment sludges, spent catalysts, and wastes listed in §261.32.] (T)
F020	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- or tetrachlorophenol, or of intermediates used to produce their pesticide derivatives. (This listing does not include wastes from the production of Hexachlorophene from highly purified 2,4,5-trichlorophenol.) (H)
F021	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of pentachlorophenol, or of intermediates used to produce its derivatives (H)
F022	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzenes under alkaline conditions (H)
F023	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- and tetrachlorophenols. (This listing does not include wastes from equipment used only for the production or use of Hexachlorophene from highly purified 2,4,5-trichlorophenol.) (H)
F025	Condensed light ends, spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution (T)
F026	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzene under alkaline conditions (H)
F027	Discarded unused formulations containing tri-, tetra-, or pentachlorophenol or discarded unused formulations containing compounds derived from these chlorophenols. (This listing does not include formulations containing Hexachlorophene sythesized from prepurified 2,4,5-trichlorophenol as the sole component.) (H)
F028	Residues resulting from the incineration or thermal treatment of soil contaminated with EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, and F027 (T)
F032	Wastewaters, process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that currently use or have previously used chlorophenolic formulations (except potentially cross-contaminated wastes that have had the F032 waste code deleted in accordance with § 261.35 of this chapter and where the generator does not resume or initiate use of chlorophenolic formulations). This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use cresote and/or pentachlorophenol. (Note: The listing of wastewaters that have not come into contact with process contaminants is stayed administratively. The listing for plants that have previously used chlorophenolic formulations is administratively stayed whenever these wastes are covered by the F034 or F035 listings. These stays will remain in effect until further administrative action is taken.) (T)

Industry and EPA Hazardous Waste Number	Hazardous Waste (Hazard Code)
F034	Wastewaters, process residuals, preservative drippage, and spent formulations from wood preserving process generated at plants that use cresote formulations. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use cresote and/or pentachlorophenol. (Note: The listing of wastewaters that have not come into contact with process contaminants is stayed administratively. The stay will remain in effect until further administrative action is taken.) (T)
F035	Wastewaters, process residuals, preservative drippage, and spent formulations from wood preserving process generated at plants that use inorganic preservatives containing arsenic or chromium. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use cresote and/or pentachlorophenol. (Note: The listing of wastewaters that have not come into contact with process contaminants is stayed administratively. The stay will remain in effect until further administrative action is taken.) (T)
F037	Petroleum refinery primary oil/water/solids separation sludge- Any sludge generated from the gravitational separation of oil/water/solids during the storage or treatment of process wastewaters and oily cooling wastewaters from petroleum refineries. Such sludges include, but are not limited to, those generated in: oil/water/solids separators; tanks and impoundments; ditches and other conveyances; sumps; and stormwater units receiving dry weather flow. Sludge generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges generated in aggressive biological treatment units as defined in § 261.31(b)(2) (including sludges generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and K051 wastes are not included in this listing (T)
F038	Petroleum refinery secondary (emulsified) oil/water/solids separation sludge- Any sludge and/or float generated from the physical and/or chemical separation of oil/water/solids in process wastewaters and oily cooling wastewaters from petroleum refineries. Such wastes include, but are not limited to, all sludges and floats generated in: induced air flotation (IAF) units, tanks and impoundments, and all sludges generated in DAF units. Sludges generated in stormwater units that do not receive dry weather flow, sludges generated from non- contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges and floats generated in aggressive biological treatment units as defined in § 261.31(b)(2) (including sludges and floats generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and F037, K048, and K051 wastes are not included in this listing (T)
F039	Leachate (liquids that have percolated through land disposal wastes) resulting from the disposal of more than one restricted waste classified as hazardous under subpart D of this part. (Leachate resulting from the disposal of one or more of the following EPA Hazardous Wastes and no other Hazardous Wastes retains its EPA Hazardous Waste Number(s): F020, F021, F022, F026, F027, and/or F028) (T)

* Hazard Codes

I	Ignitable Waste
W	Corrosive Waste
R	Reactive Waste
E	Toxicity Characteristic Waste
H	Acute Hazardous Waste
T	Toxic Waste

Hazardous Wastes from Specific Sources (K-List)

Industry and EPA Hazardous Waste Number	Hazardous Waste (Hazard Code)
Wood preservation:	
K001	Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol (T)
Inorganic pigments:	
K002	Wastewater treatment sludge from the production of chrome yellow and orange pigments (T)
K003	Wastewater treatment sludge from the production of molybdate orange pigments (T)
K004	Wastewater treatment sludge from the production of zinc yellow pigments (T)
K005	Wastewater treatment sludge from the production of chrome green pigments (T)
K006	Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous and hydrated) (T)
K007	Wastewater treatment sludge from the production of iron blue pigments (T)
K008	Oven residue from the production of chrome oxide green pigments (T)
Organic chemicals:	
K009	Distillation bottoms from the production of acetaldehyde from ethylene (T)
K010	Distillation side cuts from the production of acetaldehyde from ethylene (T)
K011	Bottom stream from the wastewater stripper in the production of acrylonitrile (R, T)
K013	Bottom stream from the acetonitrile column in the production of acrylonitrile (R, T)
K014	Bottoms from the acetonitrile purification column in the production of acrylonitrile (T)
K015	Still bottoms from the distillation of benzyl chloride (T)
K016	Heavy ends or distillation residues from the production of carbon tetrachloride (T)
K017	Heavy ends (still bottoms) from the purification column in the production of epichlorohydrin (T)
K018	Heavy ends from the fractionation column in ethyl chloride production (T)
K019	Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production (T)
K020	Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production (T)
K021	Aqueous spent antimony catalyst waste from fluoromethanes production (T)
K022	Distillation bottom tars from the production of phenol/acetone from cumene (T)
K023	Distillation light ends from the production of phthalic anhydride from naphthalene (T)
K024	Distillation bottoms from the production of phthalic anhydride from naphthalene (T)
K093	Distillation light ends from the production of phthalic anhydride from ortho-xylene (T)
K094	Distillation bottoms from the production of phthalic anhydride from ortho-xylene (T)
K025	Distillation bottoms from the production of nitrobenzene by the nitration of benzene (T)
K026	Stripping still tails from the production of methy ethyl pyridines (T)
K027	Centrifuge and distillation residues from toluene diisocyanate production (R, T)
K028	Spent catalyst from the hydrochlorinator reactor in the production 1,1,1-trichloroethane (T)
K029	Waste from the product steam stripper in the production of 1,1,1-trichloroethane (T)
K095	Distillation bottoms from the production of 1,1,1-trichloroethane (T)
K096	Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane (T)
K030	Column bottoms or heavy ends from the combined production of trichloroethylene and perchloroethylene (T)
K083	Distillation bottoms from aniline production (T)
K103	Process residues from aniline extraction from the production of aniline (T)
K104	Combined wastewater streams generated from nitrobenzene/aniline production (T)
K085	Distillation or fractionation column bottoms from the production of chlorobenzenes (T)
K105	Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes (T)

Industry and EPA Hazardous Waste Number	Hazardous Waste (Hazard Code)
K107	Column bottoms from product separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazines (C,T)
K108	Condensed column overheads from product separation and condensed reactor vent gases from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides (I,T)
K109	Spent filter cartridges from product purification from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides (T)
K110	Condensed column overheads from intermediate separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazines (T)
K111	Product washwaters from the production of dinitrotoluene via nitration of toluene (C,T)
K112	Reaction by-product water from the drying column in the production of toluenediamine via hydrogenation of dinitrotoluene (T)
K113	Condensed liquid light ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene (T)
K114	Vicinals from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene (T)
K115	Heavy ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene (T)
K116	Organic condensate from the solvent recovery column in the production of toluene diisocyanate via phosgenation of toluenediamine (T)
K117	Wastewater from the reactor vent gas scrubber in the production of ethylene dibromide via bromination of ethene (T)
K118	Spent adsorbent solids from purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene (T)
K136	Still bottoms from the purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene (T)
Inorganic chemicals:	
K071	Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used (T)
K073	Chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphite anodes in chlorine production (T)
K106	Wastewater treatment sludge from the mercury cell process in chlorine production (T)
Pesticides:	
K031	By-product salts generated in the production of MSMA and cacodylic acid (T)
K032	Wastewater treatment sludge from the production of chlordane (T)
K033	Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane (T)
K034	Filter solids from the filtration of hexachlorocyclopentadiene in the production of chlordane (T)
K097	Vacuum stripper discharge from the chlordane chlorinator in the production of chlordane (T)
K035	Wastewater treatment sludges generated in the production of creosote (T)
K036	Still bottoms from toluene reclamation distillation in the production of disulfoton (T)
K037	Wastewater treatment sludges from the production of disulfoton (T)
K038	Wastewater from the washing and stripping of phorate production (T)
K039	Filter cake from the filtration of diethylphosphorodithioic acid in the production of phorate (T)
K040	Wastewater treatment sludge from the production of phorate (T)
K041	Wastewater treatment sludge from the production of toxaphene (T)
K098	Untreated process wastewater from the production of toxaphene (T)
K042	Heavy ends or distillation residues from the distillation of tetrachlorobenzene in the production of 2,4,5-T (T)

Industry and EPA Hazardous Waste Number	Hazardous Waste (Hazard Code)
K043	2,6-Dichlorophenol waste from the production of 2,4-D (T)
K099	Untreated wastewater from the production of 2,4-D (T)
K123	Process wastewater (including supernates, filtrates, and washwaters) from the production of ethylenebisdithiocarbamic acid and its salt (T)
K124	Reactor vent scrubber water from the production of ethylenebisdithiocarbamic acid and its salts (C, T)
K125	Filtration, evaporation, and centrifugation solids from the production of ethylenebisdithiocarbamic acid and its salts (T)
K126	Baghouse dust and floor sweepings in milling and packaging operations from the production or formulation of ethylenebisdithiocarbamic acid and its salts (T)
K131	Wastewater from the reactor and spent sulfuric acid from the acid dryer from the production of methyl bromide (C,T)
K132	Spent absorbent and wastewater treatment separator solids from the production of methyl bromide (T)
Explosives:	
K044	Wastewater treatment sludges from the manufacturing and processing of explosives (R)
K045	Spent carbon from the treatment of wastewater containing explosives (R)
K046	Wastewater treatment sludges from the manufacturing, formulation and loading of lead-based initiating compounds (T)
K047	Pink/red water from TNT operations (R)
Petroleum refining:	
K048	Dissolved air flotation (DAF) float from the petroleum refining industry (T)
K049	Slop oil emulsion solids from the petroleum refining industry (T)
K050	Heat exchanger bundle cleaning sludge from the petroleum refining industry (T)
K051	API separator sludge from the petroleum refining industry (T)
K052	Tank bottoms (leaded) from the petroleum refining industry (T)
Iron and steel:	
K061	Emission control dust/sludge from the primary production of steel in electric furnaces (T)
K062	Spent pickle liquor generated by steel finishing operations of facilities within the iron and steel industry (SIC Codes 331 and 332) (C,T)
Primary copper:	
K064	Acid plant blowdown slurry/sludge resulting from the thickening of blowdown slurry from primary copper production (T)
Primary lead:	
K065	Surface impoundment solids contained in and dredged from surface impoundments at primary lead smelting facilities (T)

Primary zinc:

K066 ..... Sludge from treatment of process wastewater and/or acid plant blowdown from primary zinc production (T)

Primary aluminum:

K088 ..... Spent potliners from primary aluminum reduction (T)

Ferroalloys:

K090 ..... Emission control dust or sludge from ferrochromiumsilicon production (T)

K091 ..... Emission control dust or sludge from ferrochromium production (T)

Secondary lead:

K069 ..... Emission control dust/sludge from secondary lead smelting (T)

K100 ..... Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting (T)

Veterinary pharmaceuticals:

K084 ..... Wastewater treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds (T)

K101 ..... Distillation tar residues from the distillation of aniline-based compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds (T)

K102 ..... Residue from the use of activated carbon for decolorization in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds (T)

Ink formulation:

K086 ..... Solvent washes and sludges, caustic washes and sludges, or water washes and sludges from cleaning tubs and equipment used in the formulation of ink from pigments, driers, soaps, and stabilizers containing chromium and lead (T)

Coking:

K060 ..... Ammonia still lime sludge from coking operations (T)

K087 ..... Decanter tank tar sludge from coking operations (T)

* Hazard Codes

I Ignitable Waste

W Corrosive Waste

R Reactive Waste

E Toxicity Characteristic Waste

H Acute Hazardous Waste

T Toxic Waste

Discarded Accutely Toxic Commercial Chemical Products, Off-Specification Species, Container Residues and Spills Thereof (P-List)

Hazardous Waste Number	Chemical Abstract Number	Substance (Hazard Code*)
P023	107 - 20 - 0	Acetaldehyde, chloro-
P002	591 - 08 - 2	Acetamide, N-(aminothioxomethyl)-
P057	640 - 19 - 7	Acetamide, 2-fluoro-
P058	62 - 74 - 8	Acetic acid, fluoro-, sodium salt
P002	591 - 08 - 2	1-Acetyl-2-thiourea
P003	107 - 02 - 8	Acrolein
P070	116 - 06 - 3	Aldicarb
P004	309 - 00 - 2	Aldrin
P005	107 - 18 - 6	Allyl alcohol
P006	20859 - 73 - 8	Aluminum phosphide (R,T)
P007	2763 - 96 - 4	5-(Aminomethyl)-3-isoxazolol
P008	504 - 24 - 5	4-Aminopyridine
P009	131 - 74 - 8	Ammonium picrate (R)
P119	7803 - 55 - 6	Ammonium vanadate
P099	506 - 61 - 6	Argentate(1-), bis(cyano-C)-, potassium
P010	7778 - 39 - 4	Arsenic acid H_3AsO_4
P012	1327 - 53 - 3	Arsenic oxide As_2O_3
P011	303 - 28 - 2	Arsenic oxide As_2O_5
P011	1303 - 28 - 2	Arsenic pentoxide
P012	1327 - 53 - 3	Arsenic trioxide
P038	692 - 42 - 2	Arsine, diethyl-
P036	696 - 28 - 6	Arsonous dichloride, phenyl-
P054	151 - 56 - 4	Aziridine
P067	75 - 55 - 8	Aziridine, 2-methyl-
P013	542 - 62 - 1	Barium cyanide
P024	106 - 47 - 8	Benzenamine, 4-chloro-
P077	100 - 01 - 6	Benzenamine, 4-nitro-
P028	100 - 44 - 7	Benzene, (chloromethyl)-
P042	51 - 43 - 4	1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-, (R)-
P046	122 - 09 - 8	Benzeneethanamine, alpha,alpha-dimethyl-
P014	108 - 98 - 5	Benzenethiol
P001	81 - 81 - 2	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, & salts, when present at concentrations greater than 0.3%
P028	100 - 44 - 7	Benzyl chloride
P015	7440 - 41 - 7	Beryllium
P017	598 - 31 - 2	Bromoacetone
P018	357 - 57 - 3	Brucine
P045	39196 - 18 - 4	2-Butanone, 3,3-dimethyl-1-(methylthio)-, O-[methylamino)carbonyl] oxime
P021	592 - 01 - 8	Calcium cyanide
P021	592 - 01 - 8	Calcium cyanide $Ca(CN)_2$
P022	75 - 15 - 0	Carbon disulfide

P095 ..... 75 - 44 - 5 ..... Carbonic dichloride
P023 ..... 107 - 20 - 0 ..... Chloroacetaldehyde
P024 ..... 106 - 47 - 8 ..... p-Chloroaniline
P026 ..... 5344 - 82 - 1 ..... 1-(o-Chlorophenyl)thiourea
P027 ..... 542 - 76 - 7 ..... 3-Chloropropionitrile
P029 ..... 544 - 92 - 3 ..... Copper cyanide
P029 ..... 544 - 92 - 3 ..... Copper cyanide Cu(CN)
P030 ..... Cyanides (soluble cyanide salts), not otherwise specified
P031 ..... 460 - 19 - 5 ..... Cyanogen
P033 ..... 506 - 77 - 4 ..... Cyanogen chloride
P033 ..... 506 - 77 - 4 ..... Cyanogen chloride (CN)Cl
P034 ..... 131 - 89 - 5 ..... 2-Cyclohexyl-4,6-dinitrophenol
P016 ..... 542 - 88 - 1 ..... Dichloromethyl ether
P036 ..... 696 - 28 - 6 ..... Dichlorophenylarsine
P037 ..... 60 - 57 - 1 ..... Dieldrin
P038 ..... 692 - 42 - 2 ..... Diethylarsine
P041 ..... 311 - 45 - 5 ..... Diethyl-p-nitrophenyl phosphate
P040 ..... 297 - 97 - 2 ..... O,O-Diethyl O-pyrazinyl phosphorothioate
P043 ..... 55 - 91 - 4 ..... Diisopropylfluorophosphate (DFP)
P004 ..... 309 - 00 - 2 ..... 1,4,5,8-Dimethanonaphthalene,1,2,3,4,10,10 -hexa-chloro-1,4,4a,5,8,8a,-hexahydro (1alpha,4alpha,4abeta,5alpha,8alpha,8abeta)-
P060 ..... 465 - 73 - 6 ..... 1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10 - -hexa-chloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta,5beta,8beta,8abeta)-
P037 ..... 60 - 57 - 1 ..... 2,7:3,6-Dimethanonaphth[2,3-b]oxirene,3,4,5,6,9,9 - hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta, 7aalpha)-
P051 ..... 72 - 20 - 8 ..... 2,7:3,6-Dimethanonaphth [2,3-b]oxirene,3,4,5,6,9,9-hexachloro- 1a,2,2a,3,6,6a,7,7a-octahydro (1aalpha,2beta,2abeta,3alpha,6alpha,6abeta,7beta,7aalpha)-, &metabolites
P044 ..... 60 - 51 - 5 ..... Dimethoate
P046 ..... 122 - 09 - 8 ..... alpha,alpha-Dimethylphenethylamine
P047 ..... 534 - 52 - 1 ..... 4,6-Dinitro-o-cresol, & salts
P048 ..... 51 - 28 - 5 ..... 2,4-Dinitrophenol
P020 ..... 88 - 85 - 7 ..... Dinoseb
P085 ..... 152 - 16 - 9 ..... Diphosphoramide, octamethyl-
P111 ..... 107 - 49 - 3 ..... Diphosphoric acid, tetraethyl ester
P039 ..... 298 - 04 - 4 ..... Disulfoton
P049 ..... 541 - 53 - 7 ..... Dithiobiuret
P050 ..... 115 - 29 - 7 ..... Endosulfan
P088 ..... 145 - 73 - 3 ..... Endothall
P051 ..... 72 - 20 - 8 ..... Endrin
P051 ..... 72 - 20 - 8 ..... Endrin, & metabolites
P042 ..... 51 - 43 - 4 ..... Epinephrine
P031 ..... 460 - 19 - 5 ..... Ethanedinitrile
P066 ..... 16752 - 77 - 5 ..... Ethanimidothioic acid, N-[[(methylamino)carbonyl]oxy]-, methyl ester
P101 ..... 107 - 12 - 0 ..... Ethyl cyanide
P054 ..... 151 - 56 - 4 ..... Ethyleneimine
P097 ..... 52 - 85 - 7 ..... Famphur
P056 ..... 7782 - 41 - 4 ..... Fluorine

P057 ..... 640 - 19 - 7 ..... Fluoroacetamide
P058 ..... 62 - 74 - 8 ..... Fluoroacetic acid, sodium salt
P065 ..... 628 - 86 - 4 ..... Fulminic acid, mercury(2+) salt (R,T)
P059 ..... 76 - 44 - 8 ..... Heptachlor
P062 ..... 757 - 58 - 4 ..... Hexaethyl tetraphosphate
P116 ..... 79 - 19 - 6 ..... Hydrazinecarbothioamide
P068 ..... 60 - 34 - 4 ..... Hydrazine, methyl-
P063 ..... 74 - 90 - 8 ..... Hydrocyanic acid
P063 ..... 74 - 90 - 8 ..... Hydrogen cyanide
P096 ..... 7803 - 51 - 2 ..... Hydrogen phosphide
P060 ..... 465 - 73 - 6 ..... Isodrin
P007 ..... 2763 - 96 - 4 ..... 3(2H)-Isoxazolone, 5-(aminomethyl)-
P092 ..... 62 - 38 - 4 ..... Mercury, (acetato-O)phenyl-
P065 ..... 628 - 86 - 4 ..... Mercury fulminate (R,T)
P082 ..... 62 - 75 - 9 ..... Methanamine, N-methyl-N-nitroso-
P064 ..... 624 - 83 - 9 ..... Methane, isocyanato-
P016 ..... 542 - 88 - 1 ..... Methane, oxybis[chloro-
P112 ..... 509 - 14 - 8 ..... Methane, tetranitro- (R)
P118 ..... 75 - 70 - 7 ..... Methanethiol, trichloro-
P050 ..... 115 - 29 - 7 ..... 6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3-oxide
P059 ..... 76 - 44 - 8 ..... 4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-
P066 ..... 16752 - 77 - 5 ..... Methomyl
P068 ..... 60 - 34 - 4 ..... Methyl hydrazine
P064 ..... 624 - 83 - 9 ..... Methyl isocyanate
P069 ..... 75 - 86 - 5 ..... 2-Methyllactonitrile
P071 ..... 298 - 00 - 0 ..... Methyl parathion
P072 ..... 86 - 88 - 4 ..... alpha-Naphthylthiourea
P073 ..... 13463 - 39 - 3 ..... Nickel carbonyl
P073 ..... 13463 - 39 - 3 ..... Nickel carbonyl $Ni(CO)_4$, (T-4)-
P074 ..... 557 - 19 - 7 ..... Nickel cyanide
P074 ..... 557 - 19 - 7 ..... Nickel cynaide $Ni(CN)_2$
P075 ..... 54 - 11 - 5 ..... Nicotine, & salts
P076 ..... 10102 - 43 - 9 ..... Nitric oxide
P077 ..... 100 - 01 - 6 ..... p-Nitroaniline
P078 ..... 10102 - 44 - 0 ..... Nitrogen dioxide
P076 ..... 10102 - 43 - 9 ..... Nitrogen oxide NO
P078 ..... 10102 - 44 - 0 ..... Nitrogen oxide NO_2
P081 ..... 55 - 63 - 0 ..... Nitroglycerine (R)
P082 ..... 62 - 75 - 9 ..... N-Nitrosodimethylamine
P084 ..... 4549 - 40 - 0 ..... N-Nitrosomethylvinylamine
P085 ..... 152 - 16 - 9 ..... Octamethylpyrophosphoramide
P087 ..... 20816 - 12 - 0 ..... Osmium oxide OsO_4, (T-4)-
P087 ..... 20816 - 12 - 0 ..... Osmium tetroxide
P088 ..... 145 - 73 - 3 ..... 7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid
P089 ..... 56 - 38 - 2 ..... Parathion
P034 ..... 131 - 89 - 5 ..... Phenol, 2-cyclohexyl-4,6-dinitro-
P048 ..... 51 - 28 - 5 ..... Phenol, 2,4-dinitro-
P047 ..... 534 - 52 - 1 ..... Phenol, 2-methyl-4,6-dinitro-, & salts
P020 ..... 88 - 85 - 7 ..... Phenol, 2-(1-methylpropyl)-4,6-dinitro-
P009 ..... 131 - 74 - 8 ..... Phenol, 2,4,6-trinitro-, ammonium salt (R)

P092 ..... 62 - 38 - 4 ..... Phenylmercury acetate
P093 ..... 103 - 85 - 5 ..... Phenylthiourea
P094 ..... 298 - 02 - 2 ..... Phorate
P095 ..... 75 - 44 - 5 ..... Phosgene
P096 ..... 7803 - 51 - 2 ..... Phosphine
P041 ..... 311 - 45 - 5 ..... Phosphoric acid, diethyl 4-nitrophenyl ester
P039 ..... 298 - 04 - 4 ..... Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl] ester
P094 ..... 298 - 02 - 2 ..... Phosphorodithioic acid, O,O-diethyl S-[(ethylthio)methyl] ester
P044 ..... 60 - 51 - 5 ..... Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino) -2-oxoethyl] ester
P043 ..... 55 - 91 - 4 ..... Phosphorofluoridic acid, bis(1-methylethyl) ester
P089 ..... 56 - 38 - 2 ..... Phosphorothioic acid, O,O-diethyl O-(4-nitrophenyl) ester
P040 ..... 297 - 97 - 2 ..... Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester
P097 ..... 52 - 85 - 7 ..... Phosphorothioic acid, O-[4-[(dimethylamino)sulfonyl]phenyl] O,O-dimethyl ester
P071 ..... 298 - 00 - 0 ..... Phosphorothioic acid, O,O,-dimethyl O-(4-nitrophenyl) ester
P110 ..... 78 - 00 - 2 ..... Plumbane, tetraethyl-
P098 ..... 151 - 50 - 8 ..... Potassium cyanide
P098 ..... 151 - 50 - 8 ..... Potassium cyanide K(CN)
P099 ..... 506 - 61 - 6 ..... Potassium silver cyanide
P070 ..... 116 - 06 - 3 ..... Propanal, 2-methyl-2-(methylthio)-, O-[(methylamino)carbonyl]oxime
P101 ..... 107 - 12 - 0 ..... Propanenitrile
P027 ..... 542 - 76 - 7 ..... Propanenitrile, 3-chloro-
P069 ..... 75 - 86 - 5 ..... Propanenitrile, 2-hydroxy-2-methyl-
P081 ..... 55 - 63 - 0 ..... 1,2,3-Propanetriol, trinitrate (R)
P017 ..... 598 - 31 - 2 ..... 2-Propanone, 1-bromo-
P102 ..... 107 - 19 - 7 ..... Propargyl alcohol
P003 ..... 107 - 02 - 8 ..... 2-Propenal
P005 ..... 107 - 18 - 6 ..... 2-Propen-1-ol
P067 ..... 75 - 55 - 8 ..... 1,2-Propylenimine
P102 ..... 107 - 19 - 7 ..... 2-Propyn-1-ol
P008 ..... 504 - 24 - 5 ..... 4-Pyridinamine
P075 ..... 54 - 11 - 5 ..... Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S)-, & salts
P114 ..... 12039 - 52 - 0 ..... Selenious acid, dithallium(1+) salt
P103 ..... 630 - 10 - 4 ..... Selenourea
P104 ..... 506 - 64 - 9 ..... Silver cyanide
P104 ..... 506 - 64 - 9 ..... Silver cyanide Ag(CN)
P105 ..... 26628 - 22 - 8 ..... Sodium azide
P106 ..... 143 - 33 - 9 ..... Sodium cyanide
P106 ..... 143 - 33 - 9 ..... Sodium cyanide Na(CN)
P108 ..... 57 - 24 - 9 ..... Strychnidin-10-one, & salts
P018 ..... 357 - 57 - 3 ..... Strychnidin-10-one, 2,3-dimethoxy-
P108 ..... 57 - 24 - 9 ..... Strychnine, & salts
P115 ..... 7446 - 18 - 6 ..... Sulfuric acid, dithallium(1+) salt
P109 ..... 3689 - 24 - 5 ..... Tetraethyldithiopyrophosphate
P110 ..... 78 - 00 - 2 ..... Tetraethyl lead
P111 ..... 107 - 49 - 3 ..... Tetraethyl pyrophosphate
P112 ..... 509 - 14 - 8 ..... Tetranitromethane (R)
P062 ..... 757 - 58 - 4 ..... Tetraphosphoric acid, hexaethyl ester
P113 ..... 1314 - 32 - 5 ..... Thallic oxide
P113 ..... 1314 - 32 - 5 ..... Thallium oxide Tl_2O_3
P114 ..... 12039 - 52 - 0 ..... Thallium(I) selenite

P115 ..... 7446 - 18 - 6 ..... Thallium(I) sulfate
P109 ..... 3689 - 24 - 5 ..... Thiodiphosphoric acid, tetraethyl ester
P045 ..... 39196 - 18 - 4 ..... Thiofanox
P049 ..... 541 - 53 - 7 ..... Thioimidodicarbonic diamide $[(H_2N)C(S)]_2NH$
P014 ..... 108 - 98 - 5 ..... Thiophenol
P116 ..... 79 - 19 - 6 ..... Thiosemicarbazide
P026 ..... 5344 - 82 - 1 ..... Thiourea, (2-chlorophenyl)-
P072 ..... 86 - 88 - 4 ..... Thiourea, 1-naphthalenyl-
P093 ..... 103 - 85 - 5 ..... Thiourea, phenyl-
P123 ..... 8001 - 35 - 2 ..... Toxaphene
P118 ..... 75 - 70 - 7 ..... Trichloromethanethiol
P119 ..... 7803 - 55 - 6 ..... Vanadic acid, ammonium salt
P120 ..... 1314 - 62 - 1 ..... Vanadium oxide V_2O_5
P120 ..... 1314 - 62 - 1 ..... Vanadium pentoxide
P084 ..... 4549 - 40 - 0 ..... Vinylamine, N-methyl-N-nitroso-
P001 ..... 81 - 81 - 2 ..... Warfarin, & salts, when present at concentrations greater than 0.3%
P121 ..... 557 - 21 - 1 ..... Zinc cyanide
P121 ..... 557 - 21 - 1 ..... Zinc cyanide $Zn(CN)_2$
P122 ..... 1314 - 84 - 7 ..... Zinc phosphide Zn_3P_2, when present at concentrations greater than 10% (R,T)

* Hazard Codes

I Ignitable Waste

W Corrosive Waste

R Reactive Waste

E Toxicity Characteristic Waste

H Acute Hazardous Waste

T Toxic Waste

Discarded Commercial Chemical Products, Off-Specification Species, Container Residues and Spills Thereof (U-List)

Hazardous Waste Number	Chemical Abstract Number	Substance (Hazard Code*)
U001	75 - 07 - 0	Acetaldehyde (I)
U034	75 - 87 - 6	Acetaldehyde, trichloro-
U187	62 - 44 - 2	Acetamide, N-(4-ethoxyphenyl)-
U005	53 - 96 - 3	Acetamide, N-9H-fluoren-2-yl-
U240	94 - 75 - 7	Acetic acid, (2,4-dichlorophenoxy)-, salts & esters
U112	141 - 78 - 6	Acetic acid ethyl ester (I)
U144	301 - 04 - 2	Acetic acid, lead(2+) salt
U214	563 - 68 - 8	Acetic acid, thallium(1+) salt
see F027.	93 - 76 - 5	Acetic acid, (2,4,5-trichlorophenoxy)-
U002	67 - 64 - 1	Acetone (I)
U003	75 - 05 - 8	Acetonitrile (I,T)
U004	98 - 86 - 2	Acetophenone
U005	53 - 96 - 3	2-Acetylaminofluorene
U006	75 - 36 - 5	Acetyl chloride (C,R,T)
U007	79 - 06 - 1	Acrylamide
U008	79 - 10 - 7	Acrylic acid (I)
U009	107 - 13 - 1	Acrylonitrile
U011	61 - 82 - 5	Amitrole
U012	62 - 53 - 3	Aniline (I,T)
U136	75 - 60 - 5	Arsinic acid, dimethyl-
U014	492 - 80 - 8	Auramine
U015	115 - 02 - 6	Azaserine
U010	50 - 07 - 7	Azirino[2',3':3,4]pyrrolo[1,2-a]indole-4,7-dione, 6-amino-8-[[(aminocarbonyl)oxy]methyl]-1,1a,2,8,8a,8b-hexahydro-8a-methoxy-5-methyl-, [1aS-(1aalpha, 8beta, 8aalpha,8balpha)]-
U157	56 - 49 - 5	Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-
U016	225 - 51 - 4	Benz[c]acridine
U017	98 - 87 - 3	Benzal chloride
U192	23950 - 58 - 5	Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)-
U018	56 - 55 - 3	Benz[a]anthracene
U094	57 - 97 - 6	Benz[a]anthracene, 7,12-dimethyl-
U012	62 - 53 - 3	Benzenamine (I,T)
U014	492 - 80 - 8	Benzenamine, 4,4¼-carbonimidoylbis[N,N-dimethyl-
U049	3165 - 93 - 3	Benzenamine, 4-chloro-2-methyl-, hydrochloride
U093	60 - 11 - 7	Benzenamine, N,N-dimethyl-4-(phenylazo)-
U328	95 - 53 - 4	Benzenamine, 2-methyl-
U353	106 - 49 - 0	Benzenamine, 4-methyl-
U158	101 - 14 - 4	Benzenamine, 4,4¼-methylenebis[2-chloro-
U222	636 - 21 - 5	Benzenamine, 2-methyl-, hydrochloride
U181	99 - 55 - 8	Benzenamine, 2-methyl-5-nitro-
U019	71 - 43 - 2	Benzene (I,T)
U038	510 - 15 - 6	Benzeneaceticacid,4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy-,ethyl ester

U030 ..... 101 - 55 - 3 ..... Benzene, 1-bromo-4-phenoxy-
U035 ..... 305 - 03 - 3 ..... Benzenebutanoic acid, 4-[bis(2-chloroethyl)amino]-
U037 ..... 108 - 90 - 7 ..... Benzene, chloro-
U221 ..... 25376 - 45 - 8 ..... Benzenediamine, ar-methyl-
U028 ..... 117 - 81 - 7 ..... 1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester
U069 ..... 84 - 74 - 2 ..... 1,2-Benzenedicarboxylic acid, dibutyl ester
U088 ..... 84 - 66 - 2 ..... 1,2-Benzenedicarboxylic acid, diethyl ester
U102 ..... 131 - 11 - 3 ..... 1,2-Benzenedicarboxylic acid, dimethyl ester
U107 ..... 117 - 84 - 0 ..... 1,2-Benzenedicarboxylic acid, dioctyl ester
U070 ..... 95 - 50 - 1 ..... Benzene, 1,2-dichloro-
U071 ..... 541 - 73 - 1 ..... Benzene, 1,3-dichloro-
U072 ..... 106 - 46 - 7 ..... Benzene, 1,4-dichloro-
U060 ..... 72 - 54 - 8 ..... Benzene, 1,1'-(2,2-dichloroethylidene)bis[4-chloro-
U017 ..... 98 - 87 - 3 ..... Benzene, (dichloromethyl)-
U223 ..... 26471 - 62 - 5 ..... Benzene, 1,3-diisocyanatomethyl- (R,T)
U239 ..... 1330 - 20 - 7 ..... Benzene, dimethyl- (I,T)
U201 ..... 108 - 46 - 3 ..... 1,3-Benzenediol
U127 ..... 118 - 74 - 1 ..... Benzene, hexachloro-
U056 ..... 110 - 82 - 7 ..... Benzene, hexahydro- (I)
U220 ..... 108 - 88 - 3 ..... Benzene, methyl-
U105 ..... 121 - 14 - 2 ..... Benzene, 1-methyl-2,4-dinitro-
U106 ..... 606 - 20 - 2 ..... Benzene, 2-methyl-1,3-dinitro-
U055 ..... 98 - 82 - 8 ..... Benzene, (1-methylethyl)- (I)
U169 ..... 98 - 95 - 3 ..... Benzene, nitro-
U183 ..... 608 - 93 - 5 ..... Benzene, pentachloro-
U185 ..... 82 - 68 - 8 ..... Benzene, pentachloronitro-
U020 ..... 98 - 09 - 9 ..... Benzenesulfonic acid chloride (C,R)
U020 ..... 98 - 09 - 9 ..... Benzenesulfonyl chloride (C,R)
U207 ..... 95 - 94 - 3 ..... Benzene, 1,2,4,5-tetrachloro-
U061 ..... 50 - 29 - 3 ..... Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-chloro-
U247 ..... 72 - 43 - 5 ..... Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4- methoxy-
U023 ..... 98 - 07 - 7 ..... Benzene, (trichloromethyl)-
U234 ..... 99 - 35 - 4 ..... Benzene, 1,3,5-trinitro-
U021 ..... 92 - 87 - 5 ..... Benzidine
U202 ..... 81 - 07 - 2 ..... 1,2-Benzisothiazol-3(2H)-one, 1,1-dioxide, & salts
U203 ..... 94 - 59 - 7 ..... 1,3-Benzodioxole, 5-(2-propenyl)-
U141 ..... 120 - 58 - 1 ..... 1,3-Benzodioxole, 5-(1-propenyl)-
U090 ..... 94 - 58 - 6 ..... 1,3-Benzodioxole, 5-propyl-
U064 ..... 189 - 55 - 9 ..... Benzo[rst]pentaphene
U248 ..... 81 - 81 - 2 ..... 2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenyl-butyl)-, & salts, when present at concentrations of 0. 3% or less
U022 ..... 50 - 32 - 8 ..... Benzo[a]pyrene
U197 ..... 106 - 51 - 4 ..... p-Benzoquinone
U023 ..... 98 - 07 - 7 ..... Benzotrichloride (C,R,T)
U085 ..... 1464 - 53 - 5 ..... 2,2¼-Bioxirane
U021 ..... 92 - 87 - 5 ..... [1,1'-Biphenyl]-4,4'-diamine
U073 ..... 91 - 94 - 1 ..... [1,1 P-Biphenyl]-4,4 P-diamine, 3,3 P-dichloro-
U091 ..... 119 - 90 - 4 ..... [1,1 P-Biphenyl]-4,4 P-diamine, 3,3 P-dimethoxy-
U095 ..... 119 - 93 - 7 ..... [1,1 P-Biphenyl]-4,4 P-diamine, 3,3 P-dimethyl-
U225 ..... 75 - 25 - 2 ..... Bromoform
U030 ..... 101 - 55 - 3 ..... 4-Bromophenyl phenyl ether

U128 ..... 87 - 68 - 3 ..... 1,3-Butadiene, 1,1,2,3,4,4-hexachloro-
U172 ..... 924 - 16 - 3 ..... 1-Butanamine, N-butyl-N-nitroso-
U031 ..... 71 - 36 - 3 ..... 1-Butanol (I)
U159 ..... 78 - 93 - 3 ..... 2-Butanone (I,T)
U160 ..... 1338 - 23 - 4 ..... 2-Butanone, peroxide (R,T)
U053 ..... 4170 - 30 - 3 ..... 2-Butenal
U074 ..... 764 - 41 - 0 ..... 2-Butene, 1,4-dichloro- (I,T)
U143 ..... 303 - 34 - 4 ..... 2-Butenoic acid, 2-methyl-, 7-[[2,3-dihydroxy-
2-(1-methoxyethyl)-3-methyl-1-oxobutoxy]methyl]-
2,3,5,7a-tetrahydro-1H-pyrrolizin-1-yl ester,
[1S-[1alpha(Z),7(2S*,3R*),7aalpha]]-
U031 ..... 71 - 36 - 3 ..... n-Butyl alcohol (I)
U136 ..... 75 - 60 - 5 ..... Cacodylic acid
U032 ..... 13765 - 19 - 0 ..... Calcium chromate
U238 ..... 51 - 79 - 6 ..... Carbamic acid, ethyl ester
U178 ..... 615 - 53 - 2 ..... Carbamic acid, methylnitroso-, ethyl ester
U097 ..... 79 - 44 - 7 ..... Carbamic chloride, dimethyl-
U114 ..... 111 - 54 - 6 ..... Carbamodithioic acid, 1,2-ethanediylbis-, salts & esters
U062 ..... 2303 - 16 - 4 ..... Carbamothioic acid, bis(1-methylethyl)-, S-(2,3-dichloro-2-propenyl) ester
U215 ..... 6533 - 73 - 9 ..... Carbonic acid, dithallium(1+) salt
U033 ..... 353 - 50 - 4 ..... Carbonic difluoride
U156 ..... 79 - 22 - 1 ..... Carbonochloridic acid, methyl ester (I,T)
U033 ..... 353 - 50 - 4 ..... Carbon oxyfluoride (R,T)
U211 ..... 56 - 23 - 5 ..... Carbon tetrachloride
U034 ..... 75 - 87 - 6 ..... Chloral
U035 ..... 305 - 03 - 3 ..... Chlorambucil
U036 ..... 57 - 74 - 9 ..... Chlordane, alpha & gamma isomers
U026 ..... 494 - 03 - 1 ..... Chlornaphazin
U037 ..... 108 - 90 - 7 ..... Chlorobenzene
U038 ..... 510 - 15 - 6 ..... Chlorobenzilate
U039 ..... 59 - 50 - 7 ..... p-Chloro-m-cresol
U042 ..... 110 - 75 - 8 ..... 2-Chloroethyl vinyl ether
U044 ..... 67 - 66 - 3 ..... Chloroform
U046 ..... 107 - 30 - 2 ..... Chloromethyl methyl ether
U047 ..... 91 - 58 - 7 ..... beta-Chloronaphthalene
U048 ..... 95 - 57 - 8 ..... o-Chlorophenol
U049 ..... 3165 - 93 - 3 ..... 4-Chloro-o-toluidine, hydrochloride
U032 ..... 13765 - 19 - 0 ..... Chromic acid H2CrO4, calcium salt
U050 ..... 218 - 01 - 9 ..... Chrysene
U051 ..... Creosote
U052 ..... 1319 - 77 - 3 ..... Cresol (Cresylic acid)
U053 ..... 4170 - 30 - 3 ..... Crotonaldehyde
U055 ..... 98 - 82 - 8 ..... Cumene (I)
U246 ..... 506 - 68 - 3 ..... Cyanogen bromide (CN)Br
U197 ..... 106 - 51 - 4 ..... 2,5-Cyclohexadiene-1,4-dione
U056 ..... 110 - 82 - 7 ..... Cyclohexane (I)
U129 ..... 58 - 89 - 9 ..... Cyclohexane, 1,2,3,4,5,6-hexachloro-,
1alpha,2alpha,3beta,4alpha,5alpha,6beta)-
U057 ..... 108 - 94 - 1 ..... Cyclohexanone (I)
U130 ..... 77 - 47 - 4 ..... 1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-
U058 ..... 50 - 18 - 0 ..... Cyclophosphamide

U240 ..... 94 - 75 - 7 ..... 2,4-D, salts & esters
U059 ..... 20830 - 81 - 3 ..... Daunomycin
U060 ..... 72 - 54 - 8 ..... DDD
U061 ..... 50 - 29 - 3 ..... DDT
U062 ..... 2303 - 16 - 4 ..... Diallate
U063 ..... 53 - 70 - 3 ..... Dibenz[a,h]anthracene
U064 ..... 189 - 55 - 9 ..... Dibenzo[a,i]pyrene
U066 ..... 96 - 12 - 8 ..... 1,2-Dibromo-3-chloropropane
U069 ..... 84 - 74 - 2 ..... Dibutyl phthalate
U070 ..... 95 - 50 - 1 ..... o-Dichlorobenzene
U071 ..... 541 - 73 - 1 ..... m-Dichlorobenzene
U072 ..... 106 - 46 - 7 ..... p-Dichlorobenzene
U073 ..... 91 - 94 - 1 ..... 3,3 P-Dichlorobenzidine
U074 ..... 764 - 41 - 0 ..... 1,4-Dichloro-2-butene (I,T)
U075 ..... 75 - 71 - 8 ..... Dichlorodifluoromethane
U078 ..... 75 - 35 - 4 ..... 1,1-Dichloroethylene
U079 ..... 156 - 60 - 5 ..... 1,2-Dichloroethylene
U025 ..... 111 - 44 - 4 ..... Dichloroethyl ether
U027 ..... 108 - 60 - 1 ..... Dichloroisopropyl ether
U024 ..... 111 - 91 - 1 ..... Dichloromethoxy ethane
U081 ..... 120 - 83 - 2 ..... 2,4-Dichlorophenol
U082 ..... 87 - 65 - 0 ..... 2,6-Dichlorophenol
U084 ..... 542 - 75 - 6 ..... 1,3-Dichloropropene
U085 ..... 1464 - 53 - 5 ..... 1,2:3,4-Diepoxybutane (I,T)
U108 ..... 123 - 91 - 1 ..... 1,4-Diethyleneoxide
U028 ..... 117 - 81 - 7 ..... Diethylhexyl phthalate
U086 ..... 1615 - 80 - 1 ..... N,N P-Diethylhydrazine
U087 ..... 3288 - 58 - 2 ..... O,O-Diethyl S-methyl dithiophosphate
U088 ..... 84 - 66 - 2 ..... Diethyl phthalate
U089 ..... 56 - 53 - 1 ..... Diethylstilbesterol
U090 ..... 94 - 58 - 6 ..... Dihydrosafrole
U091 ..... 119 - 90 - 4 ..... 3,3 P-Dimethoxybenzidine
U092 ..... 124 - 40 - 3 ..... Dimethylamine (I)
U093 ..... 60 - 11 - 7 ..... p-Dimethylaminoazobenzene
U094 ..... 57 - 97 - 6 ..... 7,12-Dimethylbenz[a]anthracene
U095 ..... 119 - 93 - 7 ..... 3,3 P-Dimethylbenzidine
U096 ..... 80 - 15 - 9 ..... alpha,alpha-Dimethylbenzylhydroperoxide (R)
U097 ..... 79 - 44 - 7 ..... Dimethylcarbamoyl chloride
U098 ..... 57 - 14 - 7 ..... 1,1-Dimethylhydrazine
U099 ..... 540 - 73 - 8 ..... 1,2-Dimethylhydrazine
U101 ..... 105 - 67 - 9 ..... 2,4-Dimethylphenol
U102 ..... 131 - 11 - 3 ..... Dimethyl phthalate
U103 ..... 77 - 78 - 1 ..... Dimethyl sulfate
U105 ..... 121 - 14 - 2 ..... 2,4-Dinitrotoluene
U106 ..... 606 - 20 - 2 ..... 2,6-Dinitrotoluene
U107 ..... 117 - 84 - 0 ..... Di-n-octyl phthalate
U108 ..... 123 - 91 - 1 ..... 1,4-Dioxane
U109 ..... 122 - 66 - 7 ..... 1,2-Diphenylhydrazine
U110 ..... 142 - 84 - 7 ..... Dipropylamine (I)
U111 ..... 621 - 64 - 7 ..... Di-n-propylnitrosamine
U041 ..... 106 - 89 - 8 ..... Epichlorohydrin

U001 ..... 75 - 07 - 0 ..... Ethanal (I)
U174 ..... 55 - 18 - 5 ..... Ethanamine, N-ethyl-N-nitroso-
U155 ..... 91 - 80 - 5 ..... 1,2-Ethanediamine,
N,N-dimethyl-N P-2-pyridinyl-N P-(2-thienylmethyl)-
U067 ..... 106 - 93 - 4 ..... Ethane, 1,2-dibromo-
U076 ..... 75 - 34 - 3 ..... Ethane, 1,1-dichloro-
U077 ..... 107 - 06 - 2 ..... Ethane, 1,2-dichloro-
U131 ..... 67 - 72 - 1 ..... Ethane, hexachloro-
U024 ..... 111 - 91 - 1 ..... Ethane, 1,1 P-[methylenebis(oxy)]
bis[2-chloro-
U117 ..... 60 - 29 - 7 ..... Ethane, 1,1 P-oxybis-(I)
U025 ..... 111 - 44 - 4 ..... Ethane, 1,1 P-oxybis[2-chloro-
U184 ..... 76 - 01 - 7 ..... Ethane, pentachloro-
U208 ..... 630 - 20 - 6 ..... Ethane, 1,1,1,2-tetrachloro-
U209 ..... 79 - 34 - 5 ..... Ethane, 1,1,2,2-tetrachloro-
U218 ..... 62 - 55 - 5 ..... Ethanethioamide
U226 ..... 71 - 55 - 6 ..... Ethane, 1,1,1-trichloro-
U227 ..... 79 - 00 - 5 ..... Ethane, 1,1,2-trichloro-
U359 ..... 110 - 80 - 5 ..... Ethanol, 2-ethoxy-
U173 ..... 1116 - 54 - 7 ..... Ethanol, 2,2 P-(nitrosoimino)bis-
U004 ..... 98 - 86 - 2 ..... Ethanone, 1-phenyl-
U043 ..... 75 - 01 - 4 ..... Ethene, chloro-
U042 ..... 110 - 75 - 8 ..... Ethene, (2-chloroethoxy)-
U078 ..... 75 - 35 - 4 ..... Ethene, 1,1-dichloro-
U079 ..... 156 - 60 - 5 ..... Ethene, 1,2-dichloro-, (E)-
U210 ..... 127 - 18 - 4 ..... Ethene, tetrachloro-
U228 ..... 79 - 01 - 6 ..... Ethene, trichloro-
U112 ..... 141 - 78 - 6 ..... Ethyl acetate (I)
U113 ..... 140 - 88 - 5 ..... Ethyl acrylate (I)
U238 ..... 51 - 79 - 6 ..... Ethyl carbamate (urethane)
U117 ..... 60 - 29 - 7 ..... Ethyl ether (I)
U114 ..... 111 - 54 - 6 ..... Ethylenebisdithiocarbamic acid, salts & esters
U067 ..... 106 - 93 - 4 ..... Ethylene dibromide
U077 ..... 107 - 06 - 2 ..... Ethylene dichloride
U359 ..... 110 - 80 - 5 ..... Ethylene glycol monoethyl ether
U115 ..... 75 - 21 - 8 ..... Ethylene oxide (I,T)
U116 ..... 96 - 45 - 7 ..... Ethylenethiourea
U076 ..... 75 - 34 - 3 ..... Ethylidene dichloride
U118 ..... 97 - 63 - 2 ..... Ethyl methacrylate
U119 ..... 62 - 50 - 0 ..... Ethyl methanesulfonate
U120 ..... 206 - 44 - 0 ..... Fluoranthene
U122 ..... 50 - 00 - 0 ..... Formaldehyde
U123 ..... 64 - 18 - 6 ..... Formic acid (C,T)
U124 ..... 110 - 00 - 9 ..... Furan (I)
U125 ..... 98 - 01 - 1 ..... 2-Furancarboxaldehyde (I)
U147 ..... 108 - 31 - 6 ..... 2,5-Furandione
U213 ..... 109 - 99 - 9 ..... Furan, tetrahydro-(I)
U125 ..... 98 - 01 - 1 ..... Furfural (I)
U124 ..... 110 - 00 - 9 ..... Furfuran (I)
U206 ..... 18883 - 66 - 4 ..... Glucopyranose, 2-deoxy-2-(3-methyl-3-nitrosoureido)-, D-
U206 ..... 18883 - 66 - 4 ..... D-Glucose, 2-deoxy-2-[[(methylnitrosoamino)-carbonyl]amino]-

U126 ..... 765 - 34 - 4 ..... Glycidylaldehyde
U163 ..... 70 - 25 - 7 ..... Guanidine, N-methyl-N P-nitro-N-nitroso-
U127 ..... 118 - 74 - 1 ..... Hexachlorobenzene
U128 ..... 87 - 68 - 3 ..... Hexachlorobutadiene
U130 ..... 77 - 47 - 4 ..... Hexachlorocyclopentadiene
U131 ..... 67 - 72 - 1 ..... Hexachloroethane
U132 ..... 70 - 30 - 4 ..... Hexachlorophene
U243 ..... 1888 - 71 - 7 ..... Hexachloropropene
U133 ..... 302 - 01 - 2 ..... Hydrazine (R,T)
U086 ..... 1615 - 80 - 1 ..... Hydrazine, 1,2-diethyl-
U098 ..... 57 - 14 - 7 ..... Hydrazine, 1,1-dimethyl-
U099 ..... 540 - 73 - 8 ..... Hydrazine, 1,2-dimethyl-
U109 ..... 122 - 66 - 7 ..... Hydrazine, 1,2-diphenyl-
U134 ..... 7664 - 39 - 3 ..... Hydrofluoric acid (C,T)
U134 ..... 7664 - 39 - 3 ..... Hydrogen fluoride (C,T)
U135 ..... 7783 - 06 - 4 ..... Hydrogen sulfide
U135 ..... 7783 - 06 - 4 ..... Hydrogen sulfide H2S
U096 ..... 80 - 15 - 9 ..... Hydroperoxide, 1-methyl-1-phenylethyl- (R)
U116 ..... 96 - 45 - 7 ..... 2-Imidazolidinethione
U137 ..... 193 - 39 - 5 ..... Indeno[1,2,3-cd]pyrene
U190 ..... 85 - 44 - 9 ..... 1,3-Isobenzofurandione
U140 ..... 78 - 83 - 1 ..... Isobutyl alcohol (I,T)
U141 ..... 120 - 58 - 1 ..... Isosafrole
U142 ..... 143 - 50 - 0 ..... Kepone
U143 ..... 303 - 34 - 4 ..... Lasiocarpine
U144 ..... 301 - 04 - 2 ..... Lead acetate
U146 ..... 1335 - 32 - 6 ..... Lead, bis(acetato-O)tetrahydroxytri-
U145 ..... 7446 - 27 - 7 ..... Lead phosphate
U146 ..... 1335 - 32 - 6 ..... Lead subacetate
U129 ..... 58 - 89 - 9 ..... Lindane
U163 ..... 70 - 25 - 7 ..... MNNG
U147 ..... 108 - 31 - 6 ..... Maleic anhydride
U148 ..... 123 - 33 - 1 ..... Maleic hydrazide
U149 ..... 109 - 77 - 3 ..... Malononitrile
U150 ..... 148 - 82 - 3 ..... Melphalan
U151 ..... 7439 - 97 - 6 ..... Mercury
U152 ..... 126 - 98 - 7 ..... Methacrylonitrile (I, T)
U092 ..... 124 - 40 - 3 ..... Methanamine, N-methyl- (I)
U029 ..... 74 - 83 - 9 ..... Methane, bromo-
U045 ..... 74 - 87 - 3 ..... Methane, chloro- (I, T)
U046 ..... 107 - 30 - 2 ..... Methane, chloromethoxy-
U068 ..... 74 - 95 - 3 ..... Methane, dibromo-
U080 ..... 75 - 09 - 2 ..... Methane, dichloro-
U075 ..... 75 - 71 - 8 ..... Methane, dichlorodifluoro-
U138 ..... 74 - 88 - 4 ..... Methane, iodo-
U119 ..... 62 - 50 - 0 ..... Methanesulfonic acid, ethyl ester
U211 ..... 56 - 23 - 5 ..... Methane, tetrachloro-
U153 ..... 74 - 93 - 1 ..... Methanethiol (I, T)
U225 ..... 75 - 25 - 2 ..... Methane, tribromo-
U044 ..... 67 - 66 - 3 ..... Methane, trichloro-
U121 ..... 75 - 69 - 4 ..... Methane, trichlorofluoro-

U036 ..... 57 - 74 - 9 ..... 4,7-Methano-1H-indene,1,2,4,5,6,7,8,8-
octachloro-2,3,3a,4,7,7a-hexahydro-
U154 ..... 67 - 56 - 1 ..... Methanol (I)
U155 ..... 91 - 80 - 5 ..... Methapyrilene
U142 ..... 143 - 50 - 0 ..... 1,3,4-Metheno-2H-cyclobuta[cd]pentalen-2-one,
1,1a,3,3a,4,5,5,5a,5b,6-decachlorooctahydro-
U247 ..... 72 - 43 - 5 ..... Methoxychlor
U154 ..... 67 - 56 - 1 ..... Methyl alcohol (I)
U029 ..... 74 - 83 - 9 ..... Methyl bromide
U186 ..... 504 - 60 - 9 ..... 1-Methylbutadiene (I)
U045 ..... 74 - 87 - 3 ..... Methyl chloride (I,T)
U156 ..... 79 - 22 - 1 ..... Methyl chlorocarbonate (I,T)
U226 ..... 71 - 55 - 6 ..... Methyl chloroform
U157 ..... 56 - 49 - 5 ..... 3-Methylcholanthrene
U158 ..... 101 - 14 - 4 ..... 4,4 P-Methylenebis(2-chloroaniline)
U068 ..... 74 - 95 - 3 ..... Methylene bromide
U080 ..... 75 - 09 - 2 ..... Methylene chloride
U159 ..... 78 - 93 - 3 ..... Methyl ethyl ketone (MEK) (I,T)
U160 ..... 1338 - 23 - 4 ..... Methyl ethyl ketone peroxide (R,T)
U138 ..... 74 - 88 - 4 ..... Methyl iodide
U161 ..... 108 - 10 - 1 ..... Methyl isobutyl ketone (I)
U162 ..... 80 - 62 - 6 ..... Methyl methacrylate (I,T)
U161 ..... 108 - 10 - 1 ..... 4-Methyl-2-pentanone (I)
U164 ..... 56 - 04 - 2 ..... Methylthiouracil
U010 ..... 50 - 07 - 7 ..... Mitomycin C
U059 ..... 20830 - 81 - 3 ..... 5,12-Naphthacenedione, 8-acetyl-10-[(3-amino-2,3,6-trideoxy)
-alpha-L-lyxo-hexopyranosyl)oxy] -7,8,9,10-tetrahydro-6,8,11-
trihydroxy-1-methoxy-, (8S-cis)-
U167 ..... 134 - 32 - 7 ..... 1-Naphthalenamine
U168 ..... 91 - 59 - 8 ..... 2-Naphthalenamine
U026 ..... 494 - 03 - 1 ..... Naphthalenamine, N,N P-bis(2-chloroethyl)-
U165 ..... 91 - 20 - 3 ..... Naphthalene
U047 ..... 91 - 58 - 7 ..... Naphthalene, 2-chloro-
U166 ..... 130 - 15 - 4 ..... 1,4-Naphthalenedione
U236 ..... 72 - 57 - 1 ..... 2,7-Naphthalenedisulfonic acid,
3,3 P-[(3,3 P- dimethyl[1,1 P-biphenyl]-4,4 P-diyl)
bis(azo)bis[5-amino-4-hydroxy]-, tetrasodium salt
U166 ..... 130 - 15 - 4 ..... 1,4-Naphthoquinone
U167 ..... 134 - 32 - 7 ..... alpha-Naphthylamine
U168 ..... 91 - 59 - 8 ..... beta-Naphthylamine
U217 ..... 10102 - 45 - 1 ..... Nitric acid, thallium(1+) salt
U169 ..... 98 - 95 - 3 ..... Nitrobenzene (I,T)
U170 ..... 100 - 02 - 7 ..... p-Nitrophenol
U171 ..... 79 - 46 - 9 ..... 2-Nitropropane (I,T)
U172 ..... 924 - 16 - 3 ..... N-Nitrosodi-n-butylamine
U173 ..... 1116 - 54 - 7 ..... N-Nitrosodiethanolamine
U174 ..... 55 - 18 - 5 ..... N-Nitrosodiethylamine
U176 ..... 759 - 73 - 9 ..... N-Nitroso-N-ethylurea
U177 ..... 684 - 93 - 5 ..... N-Nitroso-N-methylurea
U178 ..... 615 - 53 - 2 ..... N-Nitroso-N-methylurethane
U179 ..... 100 - 75 - 4 ..... N-Nitrosopiperidine

U180 ..... 930 - 55 - 2 ..... N-Nitrosopyrrolidine
U181 ..... 99 - 55 - 8 ..... 5-Nitro-o-toluidine
U193 ..... 1120 - 71 - 4 ..... 1,2-Oxathiolane, 2,2-dioxide
U058 ..... 50 - 18 - 0 ..... 2H-1,3,2-Oxazaphosphorin-2-amine,
N,N-bis(2-chloroethyl)tetrahydro-, 2-oxide
U115 ..... 75 - 21 - 8 ..... Oxirane (I,T)
U126 ..... 765 - 34 - 4 ..... Oxiranecarboxyaldehyde
U041 ..... 106 - 89 - 8 ..... Oxirane, (chloromethyl)-
U182 ..... 123 - 63 - 7 ..... Paraldehyde
U183 ..... 608 - 93 - 5 ..... Pentachlorobenzene
U184 ..... 76 - 01 - 7 ..... Pentachloroethane
U185 ..... 82 - 68 - 8 ..... Pentachloronitrobenzene (PCNB)
See F027. ..... 87 - 86 - 5 ..... Pentachlorophenol
U161 ..... 108 - 10 - 1 ..... Pentanol, 4-methyl-
U186 ..... 504 - 60 - 9 ..... 1,3-Pentadiene (I)
U187 ..... 62 - 44 - 2 ..... Phenacetin
U188 ..... 108 - 95 - 2 ..... Phenol
U048 ..... 95 - 57 - 8 ..... Phenol, 2-chloro-
U039 ..... 59 - 50 - 7 ..... Phenol, 4-chloro-3-methyl-
U081 ..... 120 - 83 - 2 ..... Phenol, 2,4-dichloro-
U082 ..... 87 - 65 - 0 ..... Phenol, 2,6-dichloro-
U089 ..... 56 - 53 - 1 ..... Phenol, 4,4 P-(1,2-diethyl-1,2-ethenediyl)bis-, (E)-
U101 ..... 105 - 67 - 9 ..... Phenol, 2,4-dimethyl-
U052 ..... 1319 - 77 - 3 ..... Phenol, methyl-
U132 ..... 70 - 30 - 4 ..... Phenol, 2,2 P-methylenebis[3,4,6-trichloro-
U170 ..... 100 - 02 - 7 ..... Phenol, 4-nitro-
See F027. ..... 87 - 86 - 5 ..... Phenol, pentachloro-
See F027. ..... 58 - 90 - 2 ..... Phenol, 2,3,4,6-tetrachloro-
See F027. ..... 95 - 95 - 4 ..... Phenol, 2,4,5-trichloro-
See F027. ..... 88 - 06 - 2 ..... Phenol, 2,4,6-trichloro-
U150 ..... 148 - 82 - 3 ..... L-Phenylalanine, 4-[bis(2-chloroethyl)amino]-
U145 ..... 7446 - 27 - 7 ..... Phosphoric acid, lead(2+) salt (2:3)
U087 ..... 3288 - 58 - 2 ..... Phosphorodithioic acid, O,O-diethyl S-methyl ester
U189 ..... 1314 - 80 - 3 ..... Phosphorus sulfide (R)
U190 ..... 85 - 44 - 9 ..... Phthalic anhydride
U191 ..... 109 - 06 - 8 ..... 2-Picoline
U179 ..... 100 - 75 - 4 ..... Piperidine, 1-nitroso-
U192 ..... 23950 - 58 - 5 ..... Pronamide
U194 ..... 107 - 10 - 8 ..... 1-Propanamine (I,T)
U111 ..... 621 - 64 - 7 ..... 1-Propanamine, N-nitroso-N-propyl-
U110 ..... 142 - 84 - 7 ..... 1-Propanamine, N-propyl- (I)
U066 ..... 96 - 12 - 8 ..... Propane, 1,2-dibromo-3-chloro-
U083 ..... 78 - 87 - 5 ..... Propane, 1,2-dichloro-
U149 ..... 109 - 77 - 3 ..... Propanedinitrile
U171 ..... 79 - 46 - 9 ..... Propane, 2-nitro- (I,T)
U027 ..... 108 - 60 - 1 ..... Propane, 2,2 P-oxybis[2-chloro-
U193 ..... 1120 - 71 - 4 ..... 1,3-Propane sultone
See F027. ..... 93 - 72 - 1 ..... Propanoic acid, 2-(2,4,5-trichlorophenoxy)-
U235 ..... 126 - 72 - 7 ..... 1-Propanol, 2,3-dibromo-, phosphate (3:1)
U140 ..... 78 - 83 - 1 ..... 1-Propanol, 2-methyl- (I,T)
U002 ..... 67 - 64 - 1 ..... 2-Propanone (I)

U007 ..... 79 - 06 - 1 ..... 2-Propenamide
U084 ..... 542 - 75 - 6 ..... 1-Propene, 1,3-dichloro-
U243 ..... 1888 - 71 - 7 ..... 1-Propene, 1,1,2,3,3,3-hexachloro-
U009 ..... 107 - 13 - 1 ..... 2-Propenenitrile
U152 ..... 126 - 98 - 7 ..... 2-Propenenitrile, 2-methyl- (I,T)
U008 ..... 79 - 10 - 7 ..... 2-Propenoic acid (I)
U113 ..... 140 - 88 - 5 ..... 2-Propenoic acid, ethyl ester (I)
U118 ..... 97 - 63 - 2 ..... 2-Propenoic acid, 2-methyl-, ethyl ester
U162 ..... 80 - 62 - 6 ..... 2-Propenoic acid, 2-methyl-, methyl ester (I,T)
U194 ..... 107 - 10 - 8 ..... n-Propylamine (I,T)
U083 ..... 78 - 87 - 5 ..... Propylene dichloride
U148 ..... 123 - 33 - 1 ..... 3,6-Pyridazinedione, 1,2-dihydro-
U196 ..... 110 - 86 - 1 ..... Pyridine
U191 ..... 109 - 06 - 8 ..... Pyridine, 2-methyl-
U237 ..... 66 - 75 - 1 ..... 2,4-(1H,3H)-Pyrimidinedione, 5-[bis(2-chloroethyl)amino]-
U164 ..... 56 - 04 - 2 ..... 4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-
U180 ..... 930 - 55 - 2 ..... Pyrrolidine, 1-nitroso-
U200 ..... 50 - 55 - 5 ..... Reserpine
U201 ..... 108 - 46 - 3 ..... Resorcinol
U202 ..... 81 - 07 - 2 ..... Saccharin, & salts
U203 ..... 94 - 59 - 7 ..... Safrole
U204 ..... 7783 - 00 - 8 ..... Selenious acid
U204 ..... 7783 - 00 - 8 ..... Selenium dioxide
U205 ..... 7488 - 56 - 4 ..... Selenium sulfide
U205 ..... 7488 - 56 - 4 ..... Selenium sulfide SeS2 (R,T)
U015 ..... 115 - 02 - 6 ..... L-Serine, diazoacetate (ester)
See F027. ..... 93 - 72 - 1 ..... Silvex (2,4,5-TP)
U206 ..... 18883 - 66 - 4 ..... Streptozotocin
U103 ..... 77 - 78 - 1 ..... Sulfuric acid, dimethyl ester
U189 ..... 1314 - 80 - 3 ..... Sulfur phosphide (R)
See F027. ..... 93 - 76 - 5 ..... 2,4,5-T
U207 ..... 95 - 94 - 3 ..... 1,2,4,5-Tetrachlorobenzene
U208 ..... 630 - 20 - 6 ..... 1,1,1,2-Tetrachloroethane
U209 ..... 79 - 34 - 5 ..... 1,1,2,2-Tetrachloroethane
U210 ..... 127 - 18 - 4 ..... Tetrachloroethylene
See F027. ..... 58 - 90 - 2 ..... 2,3,4,6-Tetrachlorophenol
U213 ..... 109 - 99 - 9 ..... Tetrahydrofuran (I)
U214 ..... 563 - 68 - 8 ..... Thallium(I) acetate
U215 ..... 6533 - 73 - 9 ..... Thallium(I) carbonate
U216 ..... 7791 - 12 - 0 ..... Thallium(I) chloride
U216 ..... 7791 - 12 - 0 ..... Thallium chloride Tlcl
U217 ..... 10102 - 45 - 1 ..... Thallium(I) nitrate
U218 ..... 62 - 55 - 5 ..... Thioacetamide
U153 ..... 74 - 93 - 1 ..... Thiomethanol (I,T)
U244 ..... 137 - 26 - 8 ..... Thioperoxydicarbonic diamide [(H2N)C(S)]2S2, tetramethyl-
U219 ..... 62 - 56 - 6 ..... Thiourea
U244 ..... 137 - 26 - 8 ..... Thiram
U220 ..... 108 - 88 - 3 ..... Toluene
U221 ..... 25376 - 45 - 8 ..... Toluenediamine
U223 ..... 26471 - 62 - 5 ..... Toluene diisocyanate (R,T)
U328 ..... 95 - 53 - 4 ..... o-Toluidine

U353	106 - 49 - 0	p-Toluidine
U222	636 - 21 - 5	o-Toluidine hydrochloride
U011	61 - 82 - 5	1H-1,2,4-Triazol-3-amine
U227	79 - 00 - 5	1,1,2-Trichloroethane
U228	79 - 01 - 6	Trichloroethylene
U121	75 - 69 - 4	Trichloromonofluoromethane
See F027.	95 - 95 - 4	2,4,5-Trichlorophenol
See F027.	88 - 06 - 2	2,4,6-Trichlorophenol
U234	99 - 35 - 4	1,3,5-Trinitrobenzene (R,T)
U182	123 - 63 - 7	1,3,5-Trioxane, 2,4,6-trimethyl-
U235	126 - 72 - 7	Tris(2,3-dibromopropyl) phosphate
U236	72 - 57 - 1	Trypan blue
U237	66 - 75 - 1	Uracil mustard
U176	759 - 73 - 9	Urea, N-ethyl-N-nitroso-
U177	684 - 93 - 5	Urea, N-methyl-N-nitroso-
U043	75 - 01 - 4	Vinyl chloride
U248	81 - 81 - 2	Warfarin, & salts, when present at concentrations of 0.3% or less
U239	1330 - 20 - 7	Xylene (I)
U200	50 - 55 - 5	Yohimban-16-carboxylic acid, 11,17-dimethoxy-18-[(3,4,5-trimethoxybenzoyl)oxy]-, methyl ester, (3beta,16beta,17alpha,18beta,20alpha)-
U249	1314 - 84 - 7	Zinc phosphide Zn3P2, when present at concentrations of 10% or less

* Hazard Codes

I Ignitable Waste

W Corrosive Waste

R Reactive Waste

E Toxicity Characteristic Waste

H Acute Hazardous Waste

T Toxic Waste

Please refer to the Instructions for Filing Notification before completing this form. The information requested in the form is required by Section 3010 of the Resouce Conservation Recovery Act.

Notification of
Regulated Waste Activity
Kansas Department of Health & Environment

Official Use Only

I. INSTALLATION's EPA ID NUMBER Mark "X' in the appropriate box.

☐ A. First ☐ B. Subsequent Notification (Complete Item C)

C. INSTALLATION'S EPA ID NUMBER

II. NAME OF INSTALLATION

III. LOCATION of INSTALLATION (Physical address NOT P.O. Box or Route Number)

STREET

CITY or TOWN | **STATE** | **ZIP CODE**

COUNTY NAME | **CODE** | **KDHE DISTRICT** | **#**

IV. INSTALLATION MAILING ADDRESS (See Instructions)

STREET or P.O. BOX

CITY or TOWN | **STATE** | **ZIP CODE**

V. INSTALLATION CONTACT (PERSON to be contacted about waste activities)

LAST NAME | **FIRST NAME**

JOB TITLE | **AREA CODE & PHONE NUMBER**

VI. INSTALLATION CONTACT'S MAILING ADDRESS (See Instructions)

A.Contact Address
☐ Location
☐ Mailing
☐ Other

B. STREET or P.O. BOX

CITY or TOWN | **STATE** | **ZIP CODE**

VII. OWNERSHIP (See Instructions)

A. NAME of LEGAL OWNER

STREET, P.O. BOX, or ROUTE NUMBER

CITY or TOWN | **STATE** | **ZIP CODE**

AREA CODE and PHONE NUMBER | **B. LAND TYPE** | **C. OWNER TYPE** | **D. Change of Owner** Yes / No | **(Date Changed)** Month / Day / Year

KDHE Form 8700-12 (4-99) Previous editions are obsolete.

VIII. TYPE OF REGULATED WASTE ACTIVITY Mark 'X' in the appropriate boxes. (See Instructions.)

A. Hazardous Waste Activity

1. Generator (see instructions)
   - ☐ 1000 kg/mo (2200 lbs) or more
   - ☐ 25 or more but less than 1000 kg/mo (55-2200 lbs)
   - ☐ Less than 25 kg/mo (55 lbs)
2. Transporter (Indicate Mode)
   - ☐ For own waste only
   - ☐ For commercial purposes

   Mode of Transportation
   - ☐ Air
   - ☐ Rail
   - ☐ Highway
   - ☐ Water
   - ☐ Other-specify

   [ ]
3. ☐ Treater, Storer, Disposer (at installation) Note: A permit is required for this activity. (See instructions)
4. Hazardous Waste-as-Fuel
   - ☐ a. Generator Marketing to Burner
   - ☐ b. Other Marketers
   - ☐ c. Boiler and/or Industrial Furnace (Burner)
     - ☐ 1. Smelter Deferral
     - ☐ 2. Small Quantity Exemption

   Indicate Type of Combustion Device
     - ☐ 1. Utility Boiler
     - ☐ 2. Industrial Boiler
     - ☐ 3. Industrial Furnace
5. ☐ Underground Injection Control

B. Used Oil Recycling Activities

1. Used Oil Fuel Marketer
   - ☐ a. Marketer Who Directs Shipment of Used Oil to Off-Specification Burner
   - ☐ b. Marketer Who First Claims the Used Oil Meets the Specifications
2. Used Oil Burner - Indicate Type(s) of Combustion Device(s)
   - ☐ a. Utility Boiler
   - ☐ b. Industrial Boiler
   - ☐ c. Industrial Furnace
3. Used Oil Transporter - Indicate Type(s) of Activity(ies)
   - ☐ a. Transporter
   - ☐ b. Transfer Facility
4. Used Oil Processor/Re-Refiner - Indicate Type(s) of Activity(ies)
   - ☐ a. Process
   - ☐ b. Re-refine

IX. DESCRIPTION OF REGULATED WASTE (Use additional sheets if necessary)

A. Characteristics of Nonlisted Hazardous Wastes. Mark 'X' in the boxes corresponding to the characteristics of nonlisted hazardous waste at this installation.

1. Ignitable (D001)	2. Corrosive (D002)	3. Reactive (D003)
[ ]	[ ]	[ ]

4. Toxicity Characteristic (List specific EPA hazardous waste number(s) for the Toxicity Characteristic contaminants)

[ ] [ ] [ ] [ ] [ ]

B. Listed Hazardous Wastes (F, K, P, U Listed Wastes)

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24

X. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature	Name and Official Title (type or print)	Date Signed

XI. COMMENTS

MAIL COMPLETED FORM TO: KANSAS DEPARTMENT OF HEALTH & ENVIRONMENT
BUREAU OF WASTE MANAGEMENT
FORBES FIELD, BLDG. 740
TOPEKA, KS 66620-0001

Definitions

Notification of Regulated Waste Activity Form

The following definitions are provided to assist with understanding and completing the Notification of Regulated Waste Activity Form. If referencing these definitions does not provide the information needed to complete this form, please contact us by calling (785) 296-1600.

Authorized Representative means the person responsible for the overall operation of the installation or an operational unit, e.g., superintendent or plant manager, or person of equivalent responsibility.

Boiler means an enclosed device using controlled flame combustion and having the following characteristics:

3. The unit has physical provisions for recovering and exporting energy in the form of steam, heated fluids, or heated gasses;

34. The unit's combustion chamber and primary energy recovery section(s) is/are of integral design (i.e., they are physically formed into one manufactured or assembled unit);

35. The unit continuously maintains an energy recovery efficiency of at least 60 percent, calculated in terms of the recovered energy compared with the thermal value of the fuel;

36. The unit exports and utilizes at least 75 percent of the recovered energy, calculated on an annual basis (excluding recovered heat used internally in the same unit, for example, to preheat fuel or combustion air or drive fans or feed-water pumps); and

37. The unit is one which the KDHE has determined, on a case-by-case basis, to be a boiler after considering the standards in 40 CFR 260.32.

Burner means the owner or operator of any boiler or industrial furnace that burns hazardous waste-as-fuel for energy recovery and that is not regulated as a RCRA hazardous waste incinerator.

Disposal means the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste or hazardous waste into or on any land or water so that such solid waste or hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into the waters, including ground waters.

Disposal Installation means an installation or part of an installation at which hazardous waste is intentionally placed into or on any land or water, and at which the hazardous waste will remain after closure.

EPA Identification Number means the number assigned by KDHE to each generator, transporter, and treatment storage, or disposal installation.

Generator means any person, by installation, whose act or process produces hazardous waste as defined or listed in 40 CFR Part 261.

Hazardous Waste means a hazardous waste as defined in 40 CFR Part 261.3.

Hazardous Waste-as-Fuel means hazardous waste and any fuel that contains hazardous waste that is burned for energy recovery in a boiler or industrial furnace that is not subject to regulation as a RCRA hazardous waste incinerator. However, the following hazardous wastes-as-fuel are subject to regulation as used oil fuels:

1. Used oil fuel burned for energy recovery that is also a hazardous waste solely because it exhibits a characteristic of hazardous waste identified in Subpart C of 40 CFR Part 261;

2. Used oil fuel mixed with hazardous wastes generated by a Kansas generator subject to 40 CFR 261.5.

Hazardous Waste-as-Fuel Marketer is a person who markets hazardous waste-as-fuel. However, generators and initial transporters (i.e., transporters who receive hazardous waste directly from generators including initial transporters who operate transfer stations) who do not market directly to persons who burn the fuels are not subject to waste-as-fuel requirements (including notification) under Subpart D of 40 CFR 266.

Industrial Boiler means a boiler located on the installation engaged in a manufacturing process where substances are transformed into new products, including the component parts of products, by mechanical or chemical processes.

Industrial Furnace means any of the following enclosed devices that are integral components of manufacturing processes and that use controlled flame combustion to accomplish recovery of materials or energy: cement kilns, lime kilns, aggregate kilns (including asphalt kilns), phosphate kilns, coke ovens, blast furnaces, smelting furnaces, refining furnaces, titanium dioxide chloride process oxidation reactors, methane reforming furnaces, pulping liquor recovery furnaces, combustion devices used in the recovery of sulfur values from spent sulfuric acid, and other devices as the KDHE may add to the list.

Installation means all contiguous land, structures, other appurtenances, and improvements on the land, used for treating, storing, or disposing of hazardous waste. An installation may consist of several treatment, storage, or disposal operational units (e.g., one or more landfills, surface impoundments, or combinations of them).

Off-Specification Used Oil Fuel means used oil fuel that does not meet the specification provided in 40 CFR 279.11.

On-Specification Used Oil Fuel means used oil fuel that meets the specification provided in 40 CFR 279.11.

Operator means the person responsible for the overall operation of an installation.

Owner means the person who owns an installation or part of an installation, including the landowner.

Storage means the holding of hazardous waste for a temporary period, at the end of which the hazardous waste is treated, disposed of, or stored elsewhere.

Small Quantity Exemption means small quantities of hazardous waste that are exempt from the requirements in 40 CFR 266.108.

Smelter Deferral means that the mandate in section 3000(g) to regulate facilities burning hazardous waste for energy recovery as may be necessary to protect human health and the environment does not apply to devices burning for the purpose of material recovery.

Transportation means the movement of hazardous waste by air, rail, highway, or water.

Transporter means a person engaged in the off-site transportation of hazardous waste by air, rail, highway, or water.

Treatment means any method, technique, or process, including neutralization, designed to change the physical, chemical or biological character or composition of any hazardous waste so as to neutralize such waste, or so as to recover energy or material resources from the waste, or so as to render such waste nonhazardous, or less hazardous; safer to transport, store or dispose of; or amenable for recovery, amenable for storage, or reduced in volume. Treatment includes any activity or processing designed to change the physical form or composition of hazardous waste so as to render it nonhazardous.

Underground Injection Control means the subsurface emplacement of fluids through a bored, drilled or driven well; or through a dug well, where the depth of the dug well is greater than the largest surface dimension.

Used Oil means any oil that has been refined from crude oil, or any synthetic oil, that has been used, and as a result of such use, is contaminated by physical or chemical impurities.

Used Oil Burner means an installation where used oil that does not meet the specification requirements in 40 CFR 279.11 is burned for energy recovery in devices identified in Section 279.61(a).

Used Oil Fuel Marketer means any person who conducts either of the following activities:

1. Directs a shipment of off-specification used oil from their facility to a used oil burner; or

2. First claims that used oil that is to be burned for energy recovery meets the used oil fuel specifications set forth in 40 CFR 279.11.

Used Oil Processor means an installation that processes on- or off-specification used oil.

Used Oil Recycling Activities, for the purposes of this form, include used oil transportation, processing, and re-refining; burning off-specification used oil fuel; and used oil fuel marketing.

Used Oil Re-Refiner is a person who produces lubricating oils and greases, industrial fuel, asphalt extender, gasoline, and other products from on- or off-specification used oil.

Used Oil Transfer Facility means any transportation related facility including loading docks, parking areas, storage areas and other areas where shipments of used oil are held for more than 24 hours during the normal course of transportation and not longer than 35 days. Transfer facilities that store used oil for more than 35 days are subject to regulation under 40 CFR Part 279, Subpart F.

Used Oil Transporter means any person who transports used oil, any person who collects used oil from more than one generator and transports the collected oil, and owners and operators of used oil transfer facilities. Used oil transporters may consolidate or aggregate loads of used oil for purposes of transportation but, with the following exception, may not process used oil. Transporters may conduct incidental processing operations that occur in the normal course of used oil transportation (e.g., settling and water separation), but that are not designed to produce (or make more amenable for production of) used oil-derived products or used oil fuel.

Utility Boiler means a boiler that is used to produce electricity, steam or heated or cooled air or other gasses or fluids for sale.

NOTIFICATION of REGULATED WASTE ACTIVITY FORM INSTRUCTIONS

Using black ink, type or print, except Section X, "Signature," the requested information in the appropriate area. Leave a blank box between words. The boxes are spaced at 1/4" intervals which accommodate elite type (12 characters per inch). When typing, hit the space bar twice between characters. If printing, place each character in a box. Abbreviate in order to stay within the number of boxes allowed for each Item. If additional sheets are used, clearly reference the Section and the Item to which the information on the separate sheet applies.

Section I--Installation's EPA ID Number:

Place an "X" in the appropriate box to indicate whether this is the first or the subsequent notification for this installation. If a previous notification has been filed, enter the current EPA ID Number assigned to this installation into the Item C. Leave Item C blank if this is the first notification for this installation.

Note: When the owner of an installation changes, the new owner must notify KDHE of the change even if the previous owner has received an EPA ID Number. Because the EPA ID Number is "site-specific," the new owner will keep the existing EPA ID Number. If the installation moves to another location, the owner/operator must notify KDHE of this change. In this instance a new EPA ID Number will be assigned.

Sections II and III--Name and Location of Installation:

Complete Sections II and III. Please note that the address for Section III. "Location of Installation" must be a physical address, **not** a post office box or route number. Include the +4 with the zip code, if known. Enter the name of the county in which the installation is located. **KDHE** will enter the county code, district and district number.

Section IV -- Installation Mailing Address:

Enter the installation's mailing address. Include the+4 with the zip code, if known. If the "Location of Installation" (Section III) and the "Installation Mailing Address" (Section IV) are the same, print "Same" in Section IV.

Section V -- Installation Contact:

Enter the name, title, and business telephone number (include area code) of the person who should be contacted regarding management of hazardous waste for this installation. A subsequent notification is required when the installation contact changes.

Section VI -- Installation Contact Mailing Address:

If the "Installation Contact Mailing Address" is the same as the "Location of Installation" (Section III) or the "Installation Mailing Address" (Section IV), place an "X" in the box to indicate where the "Installation Contact Person" can be reached. If the "Installation Contact Mailing Address is ***not*** the same as the "Location of Installation"(Section III) or the "Installation Mailing Address" (Section IV), place an "X" in the "Other" box and provide an "Installation Contact Mailing Address".

Section VII -- Ownership:

A. **Name:** Enter the name of the legal owner(s) of the installation, including the property owner. Enter the address and phone number where the legal owner can be reached. Use the comment section in Section XI or attach additional sheets to list more than one owner.

B. **Land Type:** Using the codes listed below, indicate in Section VII, Item B, the code which **best describes** the current legal status of the land on which the installation is located:

F=Federal
S=State
I=Indian
P=Private
C=County
M=Municipal*
D=District
O=Other

***Note:** If the Land Type is **better described** as Indian, County or District, please use the appropriate codes. Otherwise, use Municipal.

C. **Owner Type:** Using the codes listed below, indicate in Section VII, Item C, the code which **best describes** the legal status of the current owner of the installation.

F=Federal
S=State
I=Indian
P=Private
C=County
M=Municipal*
D=District
O=Other

***Note:** If the Owner Type is **better described** as Indian, County or District, please use the appropriate codes. Otherwise, use Municipal.

D. **Change of Owner:** If this is the installation's first notification, leave Section VII, Item D blank and skip to Section VIII. If this is a subsequent notification, complete Section VII, Item D as directed below.

If the owner of this installation has changed since the installation's original notification, place an "X" in the box marked "Yes"and enter the date of the change in ownership.

If the owner of this installation has ***not*** changed since the installation's original notification, place an "X" in the box marked "No" and skip to Section VIII.

If an additional owner(s) has/have been added or replaced since the installation's original notification, place an "X" in the box marked "Yes." Use the comment section in XI to list any additional owners, the dates they became owners, and which owner(s) they replaced. If necessary, attach a separate sheet of paper.

Section VIII -- Type of Regulated Waste Activity:

A. Hazardous Waste Activity: Mark an "X" in the appropriate box(es) to show which hazardous waste activities are on-going at this installation location address.

1) **Generator:** If the installation generates a hazardous waste that is identified by characteristic or is listed in 40 CFR Part 261, mark an "X" in the appropriate box for the quantity of non-acutely hazardous waste that is generated in any one (1) calendar month. If the installation generates acutely hazardous waste, refer to 40 CFR Part 262 for further information.

2) **Transporter:** If this installation is the location for a hazardous waste transporter, indicate if the waste is the installation's own waste or the waste is transported for commercial purposes. Mark both boxes if both activities apply. Mark an "X" in each appropriate box to indicate the method(s) of transportation used. Transporters do not have to complete Section IX on this form, but must sign the certification in Section X. The Federal regulations for hazardous waste transporters are found in 40 CFR Part 263.

3) **Treater/Storer/Disposer**: If treatment, storage or disposal of regulated hazardous waste is preformed at this installation, mark an "X" in this box. The installation is reminded to contact KDHE and request Part A of the RCRA Permit Application. The Federal regulations for hazardous waste installation owners/operators are located in 40 CFR Parts 264 and 265.

4) **Hazardous Waste-as-Fuel:** If hazardous waste-as-fuel is **marketed** at this installation, place an "X" in the appropriate box(es). If hazardous waste-as-fuel is burned on-site, place an "X" in the appropriate box(es) and indicate the type(s) of combustion devices are used to burn hazardous waste-as-fuel. Refer to definition section for complete description of each device.

Note: Generators are required to notify for waste-as-fuel activities ***only*** if they market directly to a burner.

"Other Marketer" is defined as any person, other than a **generator** marketing hazardous waste, who markets hazardous waste-as-fuel.

5) **Underground Injection Control:** If hazardous waste is generated and/or treated, stored or disposed of at this installation, place an "X" in the box if an injection well is located at this installation. "Underground Injection" means the subsurface emplacement of fluids through a bored, drilled, or driven well, or through a dug well, where the depth of the dug well is greater than the largest surface dimension.

B. Used Oil Recycling Activities

Mark an "X" in the appropriate box(es) to indicate which used oil fuel activities are taking place at this installation.

1) **Used Oil Fuel Marketer:** If off-specification used oil is marketed from this installation, mark an "X" in Section VIII B, Item 1a. If this installation is the first to claim the used oil meets the used oil specification established in 40 CFR Part 279.11, mark an "X" in Section VIII B, Item 1b. If either of these boxes are marked, this or a previous notification must reflect that this installation is a used oil transporter, off-specification used oil fuel burner, or used oil processor/re-refiner, unless this installation is a used oil generator. Used oil **generators** are not required to notify.

B. (continued) **Used Oil Recycling Activities**

2) **Used Oil Burner:** If this installation burns off-specification used oil fuel, place an "X" in the box(es) to indicate the type(s) of combustion device(s) in which off-specification used oil fuel is burned. Refer to the definition section for complete descriptions of each device.

3) **Used Oil Transporter:** If transportation of used oil and/or ownership/operation of a used oil transfer station is part of this installation's activities, place an "X" in the appropriate box(es) to indicate this used oil recycling activity.

4) **Used Oil Processor/Re-Refiner:** If processing and/or re-refining used oil at this installation, place an "X" in the appropriate box(es) to indicate the used oil activities.

Section IX -- Description of Regulated Wastes:

Only installations involved in hazardous waste activity (Section VII A.) need to complete this section. Transporters requesting an EPA ID Number need **not** complete this section, but must sign the "Certification" in Section X.

If you need help completing this section, please contact KDHE at (785) 296-1600.

A. **Characteristics of Nonlisted Hazardous Wastes:** If the hazardous wastes handled at this installation are not listed in 40 CFR Part 261, Subpart D, but do exhibit a characteristic of hazardous waste as defined in 40 CFR Part 261, Subpart C, then describe these wastes by the EPA hazardous waste number for the characteristic. Place an "X" in the box next to the characteristic of the wastes that is handled. In the case of "4. Toxicity Characteristic," list the specific EPA hazardous waste number for the specific contaminant(s) in the box(es) provided by using the appropriate four-character code(s).

B. **Listed Hazardous Wastes:** If the hazardous wastes handled at this installation are listed in 40 CFR Part 261, Subpart D, then enter the appropriate four-character code(s) in the boxes provided.

Note - If more than 12 listed hazardous wastes are handled at this installation, attach an additional page.

Section X -- Certification:

This certification **must** be signed by the owner, operator, or an authorized representative of this installation. An "authorized representative" is a person responsible for the overall operation of the installation or an operational unit (i.e. a plant manager or superintendent, or person of equal responsibility). All notifications **must** include this certification to be complete.

Section XI -- Comments: Use this space for any additional comments.

Mail completed form to:

Kansas Department of Health and Environment
Bureau of Waste Management
Forbes Field, Building 740
Topeka, KS 66620-0001

For answers to questions or copies of the Notification of Regulated Waste Activity Form call (785) 296-1600.

Appendix C

Please print or type (Form designed for use on elite (12 - pitch) typewriter)

Form Approved. OMB No. 2050 - 0039 Expires 9 - 30 - 91

UNIFORM HAZARDOUS WASTE MANIFEST

1 Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 of | Information in the shaded areas is not required by Federal law

3. Generator's Name and Mailing Address

4. Generator's Phone ( )

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name | 6. US EPA ID Number

C. State Transporter's ID

D. Transporter's Phone

7. Transporter 2 Company Name | 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address | 10. US EPA ID Number

G. State Facility's ID

H. Facility's Phone

GENERATOR

	11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.							
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; **OR,** if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name | Signature | Month | Day | Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month | Day | Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month | Day | Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name | Signature | Month | Day | Year

EPA Form 8700 - 22 (Rev. 9 - 88) Previous editions are obsolete.

Uniform Hazardous Waste Manifest Instructions

Item 1. Enter the generators U.S. EPA twelve digit identification number and the unique five digit number assigned to this manifest by the generator.

Item 2. Enter the total number of pages used to complete manifest.

Item 3. Enter name and mailing address of the generator.

Item 4. Enter a telephone number where an authorized agent of the generator may be reached in the event of an emergency.

Item 5. Enter the company name of the first transporter.

Item 6. Enter the U.S. EPA twelve digit identification number of the first transporter.

Item 7. Enter the company name of the second transporter, if appropriate.

Item 8. Enter the U.S. EPA twelve digit identification number of the second transporter.

Item 9. Enter the company name and site address of the facility designated to receive the waste listed on the manifest.

Item 10. Enter the U.S. EPA twelve digit identification number of the designated facility.

Item 11. Enter the U.S. DOT Proper Shipping Name, Hazard Class, and ID Number for each waste as identified in 49 CFR, 172.101.

Item 12. Enter the number of containers for each waste and the appropriate abbreviation from Table I (below) for the type of container.

Table I

DM = Metal drums, barrels, kegs

DW = Wooden drums, barrels, kegs

DF = Fiberboard or plastic, barrels, kegs

TP = Tanks - portable

TT = Cargo tanks (tank trucks)

TC = Tank cars

DT = Dump truck

CY = Cylinders

CM = Metal boxes, cartons, cases (including roll-offs)

CW = Wooden boxes, cartons, cases

CF = Fiber or plastic, boxes, cartons, cases

BA = Burlap, cloth, paper or plastic bags

Item 13. Enter the total quantity of waste described on each line.

Item 14. Enter the appropriate abbreviation from Table II (below) for the unit of measure.

Table II

G = Gallons (liquids only)
P = Pounds
T = Tons (2,000 lbs.)
Y = Cubic Yards
L = Liters (liquid only)
K = Kilograms
M = Metric Tons (1,000 kg)
N = Cubic Meters

Item 15. Enter any special handling instructions and additional information if appropriate.

Item 16. The generator must print his name, sign his name (by hand) and date the certification statement.

Item 17. The (first) transporter must print his name, sign his name (by hand) and date the manifest.

Item 18. If a second transporter is used, the second transporter must print his name, sign his name (by hand) and date the manifest.

Item 19. This section is to be used by the designated facility to enter any discrepancies between the shipment and information on the manifest.

Item 20. The designated facility owner or operator must print his name, sign his name (by hand) and enter the date of receipt of the waste.

Manifest Forms Distribution

After completing the required manifest forms, sign the manifest and have the transporter sign the manifest. Retain the copy marked "generator's" copy. This must be kept by the generator awaiting the return of the signed original from the disposal site. Send one copy to appropriate state(s) hazardous waste agency if required. The remaining copies are given to the transporter to accompany the shipment.

The "original" manifest (first sheet) must be returned to the generator, signed by the disposal site. This insures that the disposal site received and accepted the hazardous waste. The "original" signed by the disposal site should be attached to the "generator copy."

Exception Reporting

If the signed original of the manifest is not received within 35 calendar days from the disposal site the plant must contact the disposal site to forward a copy of the signed manifest immediately. If the signed original, or a copy, has not been received with 45 days after the shipment, an Exception Report must be submitted to the Kansas Department of Health and Environment. This Exception Report must document all efforts taken to locate the hazardous waste shipment and the results of these efforts. Document all correspondence and telephone conversations.

RECORD RETENTION

U.S. EPA and Kansas regulations require that copies of the manifest signed by the disposal site must be retained for three years.

PERIODIC REPORTS

U.S. EPA and Kansas regulations require any EPA generator who ships hazardous waste off-site to submit a biennial report. These are sent to the plant by the Kansas Department of Health and Environment. If you do not receive forms, it is your responsibility to obtain the forms, complete and submit the report if applicable.

Appendix D

Commercial Hazardous Waste Facilities

ALABAMA

Waste Management, Inc. of Emelle, Alabama
P.O. Box 55
Emelle, Alabama 35459
(205) 652-9721
Waste Handled: Most hazardous wastes except radioactives, explosives, biological, or pathogenics
Services: Fixation, landfilling, fuel blending, storage, PCB
EPA I.D. No. ALD000622464

ARIZONA

Westates Carbon-Arizona
Parker Reactivation Facility
2523 Mutahar Street
Parker, Arizona 85344
(520 669-5758
EPA I.D. AZD982441263

ARKANSAS

ENSCO,Inc.
El Dorado, Arkansas 717131
Contact: Karen Barnett
(870) 863-7173
Waste Handled: Waste oils and solvents, hydrocarbons, pesticides, herbicides, and insecticides
Services: Incineration
EPA I.D. No. ARD069748192

ILLINOIS

Trade Waste Incineration—
A Division of Waste Management
#7 Mobile Avenue
Sauget, Illinois 62201
(618) 271-2804
Services: Incineration
EPA I.D. Number ILD098642424

KANSAS

Safety-Kleen Corporation
Highway 69 North
Industrial Park Road
Coffeyville, KS 67337
Contact: Johnny Price
(316) 252-1332
Services: Incineration, PCB Transformer Decontamination
EPA I.D. Number KSD981506025

Ash Grove Cement Plant
P.O. Box 519
Chanute, Kansas 66720
Contact: Jim Shea
(316) 431-4500
Services: Fuel burning in cement kiln
EPA I.D. Number KSD031203318

Ashland Chemical Company
5420 Speaker Road
Kansas City, Kansas 66106
Contact: John Ruth
(913) 621-7494 ext. 228
Waste Handled: Solvents
Services: Storage
EPA I.D. Number KSD057889313

Barton Solvents, Inc.
201 South Cedar, P.O. Box 366
Valley Center, Kansas 67147
Contact: Steven Stewart
(316) 755-2305
Waste Handled: Solvents
EPA I.D. Number KSD096537857

Heartland Cement Company
P.O. Box 428
Independence, KS 67301
Contact: Marty McClelland
(316)331-0200
Services: Fuel burning in cement kiln
EPA I.D. Number KSD980739999

Safety-Kleen Corporation
2549 New York
Wichita, Kansas 67219
Contact: Rusty Dunn
(316) 269-7400
Services: Solvent recovery, blending solvents for fuel, dry cleaning waste, wastewater, waste analysis, storage
EPA I.D. Number KSD007246846

Safety-Kleen Corporation
600 East Trail
Dodge City, Kansas 67801
Contact: Mark Jordan
(620) 225-5016
Waste Handled: Solvents
EPA I.D. Number KSD980686844

Safety-Kleen Corporation
4801 West Irving
Wichita, Kansas 67209
Contact: Mark Jordan
(316) 942-5001
EPA I.D. Number KSD000809723

Systech Environmental Corporation
South Cement Road, P.O. Box 111
Fredonia, Kansas 66736
Contact: Ms. Jackie Carpenter
(316) 378-4451
Waste Handled: Solvents
EPA I.D. Number KSD980633259

VOPAK USA
2041 North Mosley
Wichita, Kansas 67214
Contact: Mark Hess
(316) 250-7925
Services: All waster materials

LOUISIANA

Safety-Kleen Corporation
3763 Highway 471
Colfax, Louisiana 71417
Contact: Jim Creekmore
(800) 628-3443
Services: Thermally treat explosive/reactive materials, solids, sludges liquids, gases; store, prepare and treat energetic/reactive waste streams
EPA I.D. Number LAD981055791

MISSOURI

Hauser & Miller Company
10950 Lin-Valle
St.Louis, Missouri 63123
Contact: Tom Wuennenberg
(314) 487-1311
Waste Handled: Mercury, precious metals
Services: Recovery

Heritage Environmental Services
8525 N.E. 38th Street
Kansas City, Missouri 64161
Contact: John Dillow
(816) 454-9441
Waste Handled: Liquids, sludges, solvents, small quantity drums, cyanides
Services: Treatment, resource recovery, remediation
EPA I.D. Number MOD981505555

Haz-Mat Response Disposal
6300 Stadium Drive
Kansas City, Missouri 64129
Contact: Dave Englehart
(888) 429-9278 Ext. 421
Waste Handled: Heavy metals except arsenic, ballasts, flourescent lights, paints, waste oil, waste solvents, lab packs, LTLs
EPA I.D. Number MOD981123391

Safety-Kleen Corporation
901 S. Yuma
Independence, MO 64056
(816) 796-9660
EPA I.D. Number MOD980873564

Safety-Kleen Corporation
734 Northwest Bypass 66
Springfield, MO65802
(417) 869-1179
EPA I.D. Number MOD000669069

Phillip Services
700 Mulberry
Kansas City, Missouri 64101
Contact: Steve Johnson
(816) 474-1391
Waste Handled: Solvents
Services: Reclamation, disposal, fuel blending
EPA I.D. Number MOD000610766

VOPAK USA
2000 Guinotte
Kansas City, Missouri 64120
(816) 842-6240
Contact: Judy Jensen/Mark Hess/Edward Clampit
Waste Handled: Solvents
Services: Reclamation & disposal
EPA I.D. Number MOD007158157

NEBRASKA

Van Waters and Rogers
3002 F Street
Omaha, Nebraska 68107-1599
Contact: Jeanette Dahlem
(402) 733-7007
Services: Solvents recovery, liquid & solid waste incineration, landfill, lab packs, wastewater treatment
EPA I.D. Number NED000809483

Safety-Kleen Corporation
2700 W. Second St.
Grand Island, NE 68803
(308)384-1616
EPA I.D. Number NED053316535

OKLAHOMA

Hydrocarbon Recyclers, Inc./USPCI
5324 W. 46th Street South
Tulsa, Oklahoma 74107
Contact: Carolyn Rogers
(918) 446-7434
Waste Handled: Solvents, oils
Services: Recycling
EPA I.D. Number OKD000632737

Safety-Kleen Corporation
16319 E. Marshall
Tulsa, OK 74116
(918) 234-5185
EPA I.D. Number OKD000763821

USPCI/Lone Mountain
Route 2, Box 170
Waynoka, Oklahoma 73860
Contact: Gary McCuistion
(580) 697-3500
Waste Handled: Wastewaters, contaminated soils, incineration ash
Services: Landfill
EPA I.D. Number OKDO65438376

TEXAS

GNI Group
Box 7809
Corpus Christi, Texas 78467
Contact: Facility Manager
(512) 852-8284
Waste Handled: Aqueous materials
Services: Disposal well
EPA I.D. Number TXD000001016

Appendix E

Waste Oil Collectors

Midland Refining Company
5755 North Broadway
Wichita, Kansas 67219
Contact: Roseanne Harpster
(316) 838-4315

Safety-Kleen
P.O. Box 4410
Wichita, Kansas 67204
Contact: Don Cain
(316) 832-1778

Safety-Kleen
576 S 260th Street
Pittsburg, Kansas 66762
Contact:
(620) 232-6125

Victory Oil
726 I-70 Road
Russell, Kansas 67665
Contact: Pete Klaus
(913) 483-3229

Panhandle Sales, Inc.
P.O. Box 1102
Liberal, Kansas 67905-1102
Contact: Marvin Waybright
(316) 624-4441

Appendix F

Battery Recyclers

Madewell & Madewell, Inc
P.O. Box 386
Jones, Oklahoma 73049
Contact: Hugh Madewell
(405) 399-2201

Sanders Lead Company, Inc.
P.O. Drawer 707
Troy, Alabama 36081
(334) 566-5693

Schuylkill Metals
Box 36
Forest City, Missouri 64451
Contact: Ken Fisher
(660) 446-3321

Appendix G

Sign-Label-Placard Suppliers

Hazardous Materials Publishing Co.
243 West Main Street, P.O. Box 308
Kutztown, Pennsylvania 19530
(215) 683-6721
FAX (610) 683-3171

Label Master
5724 North Pulaski Road
Chicago, Illinois 60646
(800) 621-5808
FAX (800) 723-4327

Legible Signs, Incorporated
2221 Nimtz Road
Rockford, Illinois 61111
(800) 435-4177
FAX (800) 654-9679

Stonehouse Signs, Inc.
5550 West 60th Avenue, P.O. Box 546
Arvada, Colorado 80001
(800) 525-0456
FAX (800) 255-0883

Appendix H

Drum Suppliers

A-1 Barrel Company
6035 Kansas Avenue
Kansas City, Kansas 66111
(913) 299-3995

Environmental Systems
9900 Pflumm Road #38
Lenexa, Kansas 66215
(913) 888-2345

Coffeyville Re-Con, Inc.
2410 Brown Street
Coffeyville, Kansas 67337
(316) 251-1520

Grief Brothers Corporation
3341 North 7th Street Trfy
Kansas City, Kansas 66115
(913) 371-0828

Grief Brothers Corporation
RR 3 Box 46
Winfield, Kansas 67156
(316) 221-2330

Haz-Mat Response, Inc.
8925 Maple
Wichita, KS
(316) 729-9242 ex 251

Nelson Barrel Sales
714 East Euclid Street
McPherson, Kansas 67460
(316) 241-3242

Scott Barrel Company, Inc.
939 Cheyenne Street
Kansas City, Kansas 66105
(913) 342-2290

SDS, Incorporated
520 North Industrial Road
El Dorado, Kansas 67042
(316) 321-6570

VOPAK USA
2000 Guinotte
Kansas City, Missouri 64120
(816) 842-6240

Appendix I

Mercury Related Wastes

The following companies handle flourescent lighting tubes. Some of these companies recycle flourescent light ballasts.

A- TEC Recycling
P.O. Box 7391
Des Moines, Iowa 50309
(800) 551-4912

Mercury Waste Solutions
1304 West Troy Ave.
Indianapolis, IN 46225
(317) 782-3228
FAX (317) 780-4778

Haz-Mat Response Disposal
6300 Stadium Drive
Kansas City, MO 64129
Contact: Dave Englehart
(888) 429-9278 Ext. 421

Mercury Recovery Services
2021 S. Myrtle St.
Monrovia, CA 91016
(626) 303-2053

Mercury Technologies International
4741 South Durfee Avenue
Pico Rivera, CA 90660
(310) 836-4684

Proven Alernatives
4740 Shelby Dr., Suite 105
Memphis, TN 38118
(504) 849-2800

Global Recycling Technologies
387 Page Street
Stoughton, MA
(781) 341-6080
FAX (781) 341-6088
Contact: Barry Jordan

Lamp Recyclers
712 Packerland Drive
Green Bay, WI 54307
(800) 558-1166

EnviroCycle, Inc.
P.O. Box 6434
High Point, NC 27262
(336) 869-8836

Salesco Systems U.S.A., Inc.
5736 West Jefferson
Phoenix, AZ 85043
(800) 368-9095

Recyclights
401 W. 86th Street
Bloomington, MN 55420
(800) 831-2852

Mercury Waste Solutions
21211 Durand Avenue
Union Grove, WI 53182
(518) 459-0820

Bethlem Apparatus Co., Inc.
890 Front St.
P.O. Box Y
Hellerton, PA 18055
(610) 838-7034

USA Lights of U.S. Environmental Inc.
2007 County Road C-2
St. Paul, MN 55113
(561) 628-9370

Light Cycle, Inc.
1222 University Avenue
St. Paul, MN 55104
(651) 641-1309
Contact: Donna Woodruff

H.T.R., Inc.
805 Pine Street
Golden City, MO 64748
(888) 537-4874
FAX (417) 537-8715

National Environmental Services, L.L.C. (NES)
Post Office Box 390407
Minneapolis, MN 55439-0407
(952) 830-1348
FAX (952) 831-2291

Appendix J

Specific Wastes

Nickel-Cadmium Batteries

INMETCO Sales
P.O. Box 720
245 Portersville Road
Ellwood City, PA 16117-0720
(724) 758-5515
FAX: (724) 758-2845

Compressed Gas Cylinders

All Safe Fire and Security
915 Washington Avenue North
Minneapolis, MN 55401-1091
(612) 332-3473
FAX: (612) 321-9177
allsafe@allfiretest.com

Appendix K

Certified Commercial Solid/Hazardous Waste Laboratories

The following is a list of laboratories that have been certified by the Kansas Department of Health and Environment to conduct analyses for solid and hazardous waste. Each certified laboratory will have a Lab Certification number and an expiration date. In order to determine the parameters that have been certified for each laboratory, contact the laboratory or call the Office of Laboratory Improvement at (785) 296-1639.

This list was prepared as of February 1, 2000. This list is updated every quarter so is in no way to be considered complete. It is also not intended as an endorsement of any specific firm. Any individual firm, or organization not listed is unintentional on the part of the Department of Health and Environment. The list is available in a text file or zip.

The updated list is available from the Office of Laboratory Improvement and also on the KDHE web page. The address is:

www.kdhe.state.ks.us/lipo/elab
Division of Health and Environment Labs
Environmental Laboratory Program
Environmental Laboratory Summary

Certified Commercial Solid/Hazardous Waste Laboratories

A & E Analytical Laboratory, Inc.
3031 West Pawnee, Suite 500
Wichita, KS 67213-1810
(316) 943-3447

Accurate, Inc.
Environmental & Laboratory Services
505 South Lowry Street
Stillwater, OK 74074-3625
(405) 372-5300

ACZ Laboratories, Inc.
2773 Downhill Drive
Steamboat Springs, CO 80487-9400
(970) 879-6590

Advanced Technology Labs
1510 E 33rd
Signal Hill, CA 90807
(562) 989-4045

Alpha Analytical Inc.
255 Glendale
Suite 21
Sparks, NV 89431
(702) 355-1044

American Technical & Analytical Services, Inc.
875 Fee Fee Road
Maryland Heights, MO 64043-3211
(314) 434-4570

Analytical Management Laboratories, Inc
(AM Labs, Inc.)
15130 B South Keeler
Olathe, KS 66062
(913) 829-0101

Arthur D. Little, Inc.
15W Acorn Park
Cambridge, MA 02140-2390
(617) 498-5000

Cadence Environmental Energy Inc., Tech Serv. Lab
4454 Hwy 108 West
Foreman, AR 71836-0546
(870) 542-7278

Clayton Laboratory Services
22345 Roethel Drive
Novi, MI 48375-4710
(248) 344-1770

Compuchem, A Division of Liberty Analytical Corp.
501 Madison avenue
Cary, NC 27513
(919) 379-4000

Continental Analytical Services, Inc.
1804 Glendale Road
Salina KS 67401-6675
(785) 827-1273

Duke Power Analytical Laboratory
13339 Hagers Ferry Road
Huntersville, NC 28078-7929
(704) 875-5254

EA Laboratories
19 Loveton Circle
Sparks, MD 21152-9266
(410) 771-4920

Ecology & Environment Inc
4493 Walden Ave
Lancaster, NY 14086
(716) 685-8080

E-Max Labs Inc
630 Maple Avenue
Torrance, CA 90503-5001
(310) 618-8889

Environmental Chemical Corporation
6954 Cornell Road Suite 300
Cincinnati, OH 45242
(513) 482001

Environmental Laboratories, Inc.
101 N Kansas Ave
Topeka, Kansas 66603-3001
(785) 233-1860

ERMI Environmental Laboratories
400 W Bethany, Suite 190
Allen TX 75013
(800) 228-3764

GPL Laboratories LLLP
202 Perry Parkway
Gaithersburg, MD 20877
(301) 926-6802

Heritage Environmental Services, Inc.
7901 West Morris Street
Indianapolis IN 46231-1366
(317) 390-3187

International Lubrication & Fuel Consultants Inc
1201 Rio Rancho Blvd., Suite C
Rio Rancho NM 87124-9902
(505)892-1666

Kemron Environmental Services
109 Starlite Park
Marietta OH 45750
(740) 373-4071

Keystone Laboratories Inc.
1304 Adams Street
Kansas City, KS 66103-1359
(913) 321-7856

Keystone Laboratories, Inc.
600 East 17th Street South
Newton, IA 50208-1100
(515) 792-8451

Lancaster Laboratories
2425 New Holland Pike
Lancaster PA 17601-5994
(717) 656-2300

Legend Technical Services, Inc.
775 Vandalia Street
St Paul, MN 55114-1302
(651) 642-1150

M.D. Chemical & Testing Inc.
Forbes Field Bldg. 281 Suite ABC
Topeka KS 66619-5700
(785) 862-3500

Midwest Laboratories, Inc.
13611 B Street
Omaha, NE 681443617
(402) 334-7770

New England Testing Lab Inc.
1254 Douglas Ave.
North Providence RI 02904-5392
(401) 353-3420

Outreach Technologies, Inc.
311 North Aspen Avenue
Broken Arrow, OK 74012
(918) 251-2515

Pace Analytical Services, Inc.
1700 Elm St., Suite 200
Minneapolis MN 55414-2485
(612) 607-1700

Pace Analytical Services, Inc.
3970 Gilman Street
Long Beach, CA 90815

Pace Analytical Services, Inc.
Kansas City Laboratory
9608 Loriet Blvd.
Lenexa, KS 66219-2406
(913) 599-5665

Pace Analytical Services Inc.
1000 Riverbend Blvd., Suite F
St Rose LA 70087
(504) 469-0333

Pace Analytical Services
7726 Moller Road
Indianapolis, IN 46268-4163
(317) 875-5894

Pace Analytical Services, Inc.
900 Gemini Avenue
Houston, TX
(281) 488-1810

Paragon Analytics, Inc.
225 Commerce Drive
Fort Collins, CO 80524
(970) 490-1511

Precision Environmental Laboratory
10200 USA Today Way
Miramar FL 33025
(954) 431-0550

Priority Analytical Laboratory Inc.
424 Greenwood
Wichita KS 67211
(316) 269-4200

Philip Analytical Services Corporation
5555 North Service Road
Burlington, Canada
(905) 332-8788

Quality Water Analysis Laboratory
2911 Rotary Terrace
Pittsburg KS 66762
(316) 232-1970

Quantem Laboratories LLC
2033 Heritage Park Drive
Oklahoma City, OK 73120-7579
(405) 755-7272

Quanterra Environmental Services
4955 Yarrow St.
Arvada CO 80002-0000
(303) 421-6611

Quanterra Environmental Services
13715 Rider Trail North
Earth City, MO 63045-1205
(314) 298-8566

Quanterra Inc.
5307 Industrial Oaks Blvd.
Suite 160
Austin TX 78735
(512) 892-6684

Radian International
14046 Summit Drive
Bldg., B
Austin TX 78728
(512) 244-0855

Raytheon Engineers & Constructors
301 Chelsea Parkway
Boothwyn PA 19601-1323
(610) 497-8000

Safety-Kleen Corp
Denton Recycle Center
1722 Cooper Creek Road
Denton TX 76208-1500
(940) 383-2611

Savannah Labs & Env. Services
2846 Industrial Plaza Drive
Tallahassee, FL 32301
(850) 878-3994

SDK Laboratories, Inc.
1000 Corey Road P.O. Box 886
Huthinson, KS 67504-0886
(316) 665-5661

Servi-Tech Laboratories
1816 E Wyatt Earp
Dodge City KS 67801
(316) 227-7123

Severn Trent Laboratories, Inc.
10 Hazelwood Drive
Amherst, NY 14228-2298
(716) 691-2600

Severn Trent Laboratories, Inc.
11 East Olive Road
Pensacola, FL 32514
(850) 474-1001

Severn Trent Laboratories, Inc.
2417 Bond Street
University Park, IL 60466-3182
(708) 534-5200

Severn Treatment Laboratories-Connecticut
200 Monroe Turnpike
Monroe, CT 06468
(203) 261-4458

Sherry Laboratories/Oklahoma
10835 E Independence
Suite 102
Tulsa OK 74116-5673
(918) 234-7111

Sierra Environmental Monitoring
1135 Financial Blvd.
Reno NV 89502-2348
(702) 857-2400

Southern Petroleum Laboratories Inc.
8880 Interchange
Houston TX 77054-0807
(713) 660-0901

Southwell Laboratory
1838 SW 13th St.
Oklahoma City OK 73108-3404
(405) 232-1966

Southwest Laboratory of Oklahoma
1700 W albany
Broken Arrow, OK 74012
(918) 251-2858

Specialized Assays Inc.
2960 Foster Creighton Drive
Nashville TN 37204-0566
(615) 726-0177

Stover and Associates
5302 W 6th
Stillwater OK 74045
(405) 743-1435

Trace Analysis, Inc.
6701 Aberdeen Avenue Suite 9
Lubbock, TX 79424-1515
(806) 794-1296

Triangle Laboratories Inc.
801 Capitola Drive
Durham NC 27713-4411
(919) 544-5729

Trimatrix Labs
5555 Glenwood Hills Parkway
Grand Rapids MI 49588
(616) 975-4500

Trinity Analytical Labs Inc.
115 East Fifth St.
Mound Valley KS 67354-0143
(316) 328-3222

Wastewater Treatment, Inc.
35425 West 103rd Street
Desoto, KS 66018-0549
(913) 583-3000

Acronyms Commonly Used in State and Federal Environmental Regulations

BWM	Bureau of Waste Management
CAA	Clean Air Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR	Code of Federal Regulations
CWA	Clean Water Act
DOT	United States Department of Transportation
EPA	United States Environmental Protection Agency
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
HSWA	Hazardous and Solid Waste Amendments of 1984
K.A.R.	Kansas Administrative Regulations
K.S.A.	Kansas Statutes Annotated
KDHE	Kansas Department of Health and Environment
LDR	Land Disposal Restrictions
MSDS	Material Safety Data Sheets
MSW	Municipal Solid Waste
MSWLF	Municipal Solid Waste Landfill
NIOSH	National Institute of Occupational Safety and Health
POTW	Publicly Owned Treatment Works
PPE	Personal Protection Equipment
RCRA	Resource Conservation and Recovery Act of 1976
SARA	Superfund Amendments and Reauthorization Act
SEP	Supplemental Environmental Projects
TCLP	Toxic Characteristic Leaching Procedure
TRI	Toxic Release Inventory
TSCA	Toxic Substances Control Act of 1976
TSD	Treatment, Storage, or Disposal Facility